The Croonian Lectures

ON

SOME POINTS CONNECTED WITH SLEEP, SLEEPLESSNESS, AND HYPNOTICS.

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BY JOHN BUCKLEY BRADBURY, M.D. CANTAB.,

FELLOW OF THE COLLEGE; DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE; AND SENIOR PHYSICIAN TO ADDENBROOKE'S HOSPITAL.

LECTURE IV.[1]

Delivered on June 29th, 1899.

MR. PRESIDENT AND GENTLEMEN,—I concluded my last lecture by stating that attempts had been made to find less dangerous and equally effective substitutes for morphine. To two such compounds I now wish to draw your attention.

In 1890 Stockman, in conjunction with Dott,[2] published experiments made on some derivatives of morphine. They introduced into the morphine molecule various alkyl and acid radicles and chlorine (substitution products) and also modified it by the addition of methyl chloride (addition product). As we have seen, morphine contains two hydroxyl groups, and the hydrogen of one of these, probably united to an aromatic nucleus, is more easily replaced than the other. When this is replaced by methyl, ethyl, or amyl the morphine action still remains, but the compounds thus produced are more toxic, their narcotic power is less, their tetanising power is greater, and they have a greater effect upon the motor nerves. On the whole their experiments do not seem to give much support to Schröder's law, as they say: "Theoretically, there is possibly a difference in the actions of the three substances, but it must be entirely quantitative, not qualitative, and our methods of investigation were not sufficiently fine to detect it (if it really exists)." Von Mering's recent observations are even more convincing. From clinical observation he found propyl-morphine, isobutyl-morphine, and amyl-morphine distinctly feebler than methyl- and ethyl-morphines. "The majority of the patients," he says, "clamoured for the two last-named substances."[3] When acetyl and benzoyl radicles were introduced and acetyl-morphine, diacetyl-morphine, benzoyl-morphine, and di-benzoyl-morphine thus produced a similar effect was obtained; the narcotising action was less and the tetanising action was greater than in the case of morphine; the heart was also more affected. The narcotic effect, however, is present after small doses (one milligramme—$\frac{1}{60}$th grain—of acetyl morphine in the case of rabbits), but it does not appear to increase with increase of the dose, tetanic symptoms developing instead. "The depressant action of small doses on the cord, and especially on the respiratory centre," Stockman and Dott say, "is very much greater than that of morphine." From this statement we should not expect any of these to be of value as substitutes for morphine. But the case is otherwise regarding codeine, as they say that "compared with codeine they (the acid derivatives) induce an equal narcotic effect with about one-tenth of the dose, while a dose about three times as large is necessary to cause tetanus. Their depressing action on motor nerves is about the same; the nausea and diarrhœa occurring in dogs is quite as great as after codeine." Thus as a substitute for codeine we might expect one of these substances to be of value. Quite recently Dreser,[4] on the strength of researches mainly on the respiration, has introduced diacetyl-morphine under the name of "heroin" into therapeutics. According to him it is more powerfully sedative and correspondingly less toxic than codeine; it lengthens the time of inspiration, increases the gaseous exchange, and does not affect the sensibility except in diminishing any tendency to over-extension of the lungs. So far the clinical results have supported Dreser's experiments, but as yet they have been too few to decide the position which this drug will hold in therapeutics. Von Mering says that di-acetyl-morphine, diproprionyl morphine, and di-benzoyl morphine diminish reflex irritability and the tendency to cough, but they are less effective as alleviators of pain than morphine. He believes that these substances are not suitable for practical use because they tend to decompose and do not form salts sufficiently soluble in water for hypodermic injection. But for this they were not recommended. Von Mering has found, on the other hand, that mono-acetyl morphine—in which the acetyl replaces the hydrogen of the alcoholic hydroxyl of morphine—is more sedative and less toxic than di-acetyl-morphine, and he states that he has used this substance with success in cases of advanced pulmonary tuberculosis in which codeine and di-acetyl-morphine had proved of little effect. "In a few cases its administration gave rise to stupor of the head, nausea, and constipation."[5]

The other derivative of morphine which has been introduced as a substitute is benzyl-morphine, the hydrochloride of which—$C_{17}H_{18}NO_3.O.C_6H_5.CH_2.HCl$—is called "peronin." This was introduced into practice by von Mering, who found it slightly less active than morphine but freer from ill effects. According to Schröder[6] it occupies pharmacologically a position between morphine and codeine, producing more restful sleep than the latter and no symptoms of stimulation. Moyer's more recent investigations[7] do not, however, support this statement. Small doses given to rabbits produced a certain amount of torpor, but the animals reacted to the least stimulus and if the dose was increased convulsions were produced. If artificial respiration was performed death resulted from cardiac paralysis. The lethal dose he found smaller than codeine, being in rabbits—peronin 0·023 gramme to 0·025 gramme, and codeine 0·063 gramme per kilogramme body-weight. My own investigations support these results. In a rabbit after a dose of 0·01 gramme per kilogramme injected intravenously convulsions occurred; in a rat (155 grammes) 0·02 gramme (0·13 gramme per kilogramme) injected into the peritoneal cavity produced depression, slow, deep respirations, clonic convulsions, and death in nine minutes. Codeine 0·0143 gramme given to a rat weighing 114 grammes (0·125 gramme per kilogramme) under similar conditions produced convulsions but was not fatal; but in one case 0·15 gramme per kilogramme caused death in eight minutes. Fish, too, are more susceptible to peronin than codeine, minnows dying sooner in 1 in 50,000 of the former than 1 in 7500 of the latter.

Stursberg[8] also appears to have found peronin more active than codeine and further removed from morphine pharmacologically, but, like myself, he also seems to have found it somewhat more sedative than codeine. From an experimental point of view, however, there seems little to recommend it in preference to codeine, as its increased sedative action does no more than counterbalance its increased toxic effect. But its true place in therapeutics must be settled by clinical observation and at present this is insufficient. It has not been used much as a hypnotic, but in the relief of pain and of the irritative cough of phthisis and chronic bronchitis it seems to have proved of value. Writing recently von Mering says that he has repeatedly satisfied himself of the excellent properties of this substance, but he regards its practical application as being limited partly on account of its sparing solubility (1 in 133) which makes it useless for injections and partly owing to its rather caustic taste.[9]

The other derivatives of morphine do not possess any practical interest. Chloromorphine, according to Stursberg, is allied in action to morphine; it possesses a narcotic effect and influences the respiration in a similar manner and in large doses it causes neither increase in the number of respirations nor the appearance of tetanus. He suggests its use in therapeutics. Previously Stockman had found that the chlorine derivatives of morphine, more particularly trichlor-morphine, acted in a similar manner on the nervous system to morphine, but he also found that they acted slightly as muscle poisons; tetanus followed their administration, but this was masked to some extent by the action of the drugs upon the motor nerves. On the whole, there seems no pharmacological reason for their introduction into

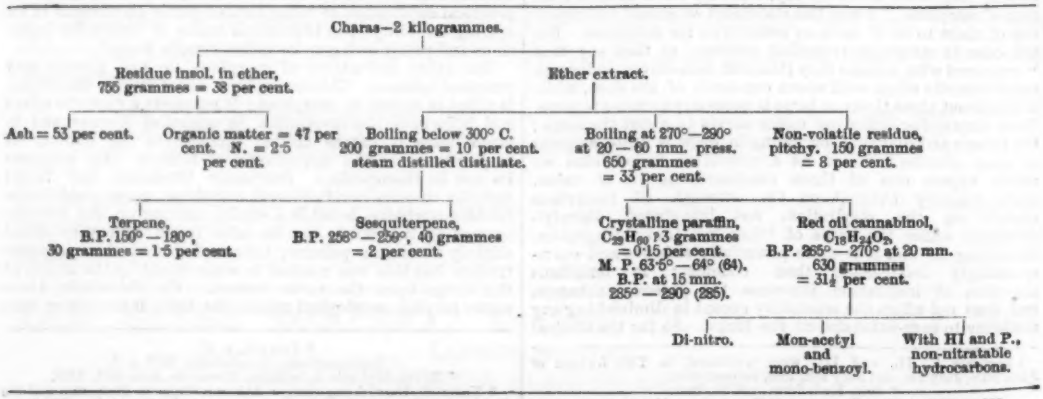
[1] Lectures I., II., and III. were published in THE LANCET of June 24th, July 1st, and July 8th, 1899, respectively.
[2] Brit. Med. Jour., vol. ii., 1890.
[3] Merck's Annual Report for 1898, published March, 1899.
[4] Pflüger's Archiv, Band lxxii., p. 455.
[5] Loc. cit., p. 10.
[6] Therapeutische Monatshefte, 1897, p. 4.
[7] Revue Médicale de la Suisse Romande, June 20th, 1898.
[8] Ueber die Einwirkung einiger Abkömmlinge des Morphins auf die Atmung, Arch. d. Pharm., vol. iii.
[9] Merck's Annual for 1898, p. 12-13.

therapeutics. An interesting point, and one with which I must close this part of my subject, in connexion with the influence of radicles introduced into morphine is the action of methyl codeine, $C_{17}H_{16}(CH_3)NO.OH.OCH_3$. In this substance a methyl group has been introduced into the parent nucleus of the morphine instead of into a side chain and according to Stockman the action of codeine is completely changed. No narcosis or tetanus is produced, but in their place paralysis of the voluntary muscles and depression of the spinal cord. It is therefore evident that we must look for no substitutes for morphine among its decomposition products.

The drug next in interest to opium as a hypnotic is cannabis indica, and as the most recent researches on this substance have emanated from our Cambridge School I intend to dwell somewhat in detail upon it. Three years ago Messrs. Wood, Spivey, and Easterfield began to investigate the chemistry of this plant and as charas was its most active product they decided to work with this. Previously various substances had been stated to be the active principle. A resinous compound was isolated by O'Shaughnessy, Robertson, T. and H. Smith, and other more recent investigators; an oily substance was obtained by Personne; alkaloids by a few experimenters; and to each of these the activity of Indian hemp was thought to be due. I will dispose of the alkaloids first. Many pharmacologists have thought that the effects of this plant would be found to depend upon a substance of this nature, mainly, it would appear, on account of its powerful physiological effects, but as yet this view has received little experimental support. Only minute quantities of an alkaloid have been found by some of the most recent workers and many have failed to obtain any. None was obtained by Wood, Spivey, and Easterfield from charas although it was carefully looked for. A pure alkaloid, cannabin finds a place in Merck's price-list, but although I have had it on order for some time it has not been obtainable. The firm states that recent samples of the drug have not contained any. As the alkaloid first isolated appears to have been nicotine, and as most recent investigators have failed to obtain more than traces of an alkaloid and these not possessing the peculiar action of the drug, the hypothesis that the activity of Indian hemp is dependent upon this class of bodies must (for the present at least) fall to the ground. Personne's cannabene has been found to be an impure sesquiterpene and not the active principle, so I need say nothing more about it. We are therefore left with the resin, and all the most reliable observations point to this as the active substance. The brothers Smith appear to have obtained it in a fairly pure form more than half a century ago, and in reality little more was added to our knowledge of this substance until recently. In 1894 Leib Lapin[10] obtained by a very lengthy process a still purer substance which he termed "cannabindon," and still more recently the chemists at Cambridge isolated what was thought to be a pure substance and called it "cannabinol."[11] These investigators by extraction with various solvents and subsequent distillation obtained several substances, as will be seen in the following table taken from the Cambridge Philosophical Transactions (vol. ix., p. 144). These substances, with the exception of the hydrocarbon, were passed on to my late assistant for pharmacological examination. He found that the resin cannabinol was decidedly active and produced most of the symptoms attributed to Indian hemp.[12] The terpenes, in much larger doses, had no such effect. In rabbits their administration was followed by slight excitement and in men by slight diuresis. These substances may possibly aid in increasing the rapidity of absorption of the active principle, but as far as the cerebral effect of Indian hemp is concerned this is probably all they do, and this only to a slight degree. The resin in doses of 0·1 gramme (1½ grains) produced marked intoxication, weakness in the legs, loss of memory, loss of time sensation, a peculiar tendency to laugh, a sensation of dryness of the lips, and an increased viscidity of the saliva. The pulse was increased in frequency and the pupils became slightly dilated. After smaller doses similar though less-marked effects occurred, but the limit was reached with 0·01 gramme, no distinct effect being produced by doses of this size. Sleepiness as an individual symptom was not always present, but there was always cerebral depression and sleep came more easily than under normal conditions. This was especially the case if the drug was taken in the evening. In dogs and cats similar symptoms were induced but proportionately much larger doses were required. Of the two species cats were the most susceptible. The symptoms were nervous depression, ataxia, anorexia, and sleep. In rabbits the only symptoms were slight depression, a fall in the frequency of the pulse and in the temperature. After very large doses death occurred.

As regards the time of onset of the symptoms in man these usually appeared about an hour after the administration of the substance, but the time depended to a great extent on the condition of the stomach; in one experiment the onset was delayed for three hours. This slowness of action is due to the comparative insolubility of the drug in aqueous media. In very dilute acids the resin appears to be quite insoluble; in dilute alkalies very slightly soluble. Marshall[13] believes that it is mainly in alkaline solution that it is absorbed and according to him the late appearance of the symptoms is partly due to the fact that the substance must ordinarily be passed on into the intestines before solution can occur. The very slight solubility of the resin is shown by the following experiment. Two Erlenmeyer's flasks were taken; into one (A) were put 2·127 grammes of cannabinol; into the other (B) 2·335 grammes of cannabinol. Both were left over sulphuric acid until they attained a constant weight. 100 cubic centimetres of a 1 per cent. caustic soda solution were then added to A and a similar amount of 1 per cent. hydrochloric acid (anhydrous) to B. Both were shaken occasionally and left for 24 hours. The alkaline solution quickly became coloured; the acid solution remained clear. Finally, the liquid was poured off; in each case the residue rapidly washed and afterwards dried. The loss of weight in A was 0·03 gramme and in B 0·005 gramme, the latter being within the limits of experimental error.

Owing to the gradual loss of activity with age and perhaps other causes different preparations of cannabis indica often show marked variations in physiological activity. Even different specimens of cannabinol show a difference in physiological effect. To determine the cause of this various


Charas—2 kilogrammes.
Residue insol. in ether, 755 grammes = 38 per cent.
Ether extract.
Ash = 53 per cent.
Organic matter = 47 per cent. N. = 2·5 per cent.
Boiling below 300° C. 200 grammes = 10 per cent. steam distilled distillate.
Boiling at 270°—290° at 20—60 mm. press. 650 grammes = 33 per cent.
Non-volatile residue, pitchy. 150 grammes = 8 per cent.
Terpene, B.P. 150°—180°, 30 grammes = 1·5 per cent.
Sesquiterpene, B.P. 258°—259°, 40 grammes = 2 per cent.
Crystalline paraffin, $C_{29}H_{60}$? 3 grammes = 0·15 per cent. M. P. 63·5°—64° (64). B.P. at 15 mm. 285°—290° (285).
Red oil cannabinol, $C_{19}H_{24}O_2$, B.P. 265°—270° at 20 mm. 630 grammes = 31½ per cent.
Di-nitro.
Mon-acetyl and mono-benzoyl.
With HI and P., non-nitratable hydrocarbons.

[10] Dissertation, Jurjew. [11] Journal of the Chemical Society, vol. lxix., p. 541. [12] THE LANCET, Jan. 23rd, 1897, p. 235.
[13] Journal of the American Medical Association, Oct. 15th, 1898.

experiments were undertaken. Temperature in itself was found to have little influence, but the resin was found to be easily oxidised. When oxygen was passed through cannabinol, kept fluid by a temperature of 160° C., it rapidly darkened and after 19 hours the substance became very viscous and in cooling settled down to a brittle pitchy mass. On combustion this substance was found to be about half-oxidised cannabinol—that is, half the mass was probably unchanged from its original state. Given in the solid form this pitchy material was inactive probably because unabsorbed, but if previously dissolved in oil a distinct though feeble action was obtained. It is very probable therefore that the growing inactivity of Indian hemp is due to gradual oxidation, but this cannot at present be regarded as absolutely proved. Leib Lapin came to the same conclusion, but his proofs are less convincing than those of my late assistant.

We now come to the question of the active principle of Indian hemp. Is cannabinol the active ingredient? Marshall is inclined to think that it is, notwithstanding the fact that he got greater effects with spirituous and oily extracts of charas and with Merck's cannabinon. That the same symptoms are produced by cannabinol and the crude drug he thinks is an important point, and he suggests that diminished activity of the resin may be due to changes occurring during or subsequently to its manufacture, or to a diminished rapidity of absorption of the pure resin as compared with preparations of the crude drug. That cannabinol is the active principle was arrived at by a process of exclusion: All the other products, pure or impure, isolated from charas were inactive or much less active than this, and this being the case it is difficult to come to any other conclusion. At first the substance was thought to be pure; or if impure it was said that "the impurity could only be due to a stereo-chemical isomer or a compound with closely similar composition and properties." Since this was written the compound has been found to be composed of at least two substances, one having the empiric formula, $C_{21}H_{23}O.OH$ (to which the name cannabinol is now restricted),[14] the other a lower carburetted compound not yet isolated in the pure state. The former substance was isolated by means of its acetyl compound which was obtained in a crystalline form. From this the cannabinol was obtained by de-acetylising. It presented nearly all the physical properties of the original substance, but it possessed scarcely any physiological activity. Whether the residual substance possessed greater physiological action has not been determined. So far it has been impossible to free it altogether of the higher compound, but probably this will be accomplished in course of time. At present the chemists have turned their attention mainly to the analysis of this new substance. From the old cannabinol by treatment with nitric acid they obtained a body previously isolated by Bolas and Francis and termed oxycannabin. This substance is a nitro-body and a lactone, and Wood, Spivey, and Easterfield propose the provisional name of "nitro-cannabino-lactone" for it. By successive conversion into the amido- and iodo-bodies these observers have obtained cannabino-lactone, and by subsequent treatment they have obtained from this iso-phthalic acid. From their analysis they have come to the conclusion that oxycannabin is nitro-meta-tolyl-butyro-lactone and thus has been established the first step in the determination of the chemical constitution of an active cannabis product. With the further determination of the constitution of these bodies, probably more light will be thrown upon the physiological activity of cannabis preparations and it is for this reason that chemical investigations of this kind are so important to the pharmacologist and therapeutist. Several derivatives of the original cannabinol have been tried physiologically, but none of these are of therapeutic interest. It was hoped to obtain a more soluble active product, but experiments in this direction have hitherto not been attended with success. Our present position, therefore, with regard to cannabis indica is this. We have obtained a more or less pure body with active physiological properties, but varying as regards these within rather wide limits. It has been thought that some connexion probably exists between the lightness of colour and transparency of the product and its physiological activity, but the interdependence of these factors has not been definitely determined. As alcoholic and oily extracts of charas are as active as, if not more so than, cannabinol, there seems to be some other undetermined factor unless the difference in effect is due to difference in absorbability. It seems probable that the loss of activity is due to gradual oxidation of the active principle and consequently all preparations should be kept as much as possible from light, heat, and air.

Other hypnotics derived from the vegetable kingdom which have aroused interest in recent years are hyoscine and pellotine and their allies. Hyoscine, as you know, belongs to the belladonna group of alkaloids, most of which are what Ladenburg termed tropeines. These are substances consisting of a base tropine united to an organic acid; atropine and hyoscyamine, for example, consist of tropine united to tropic acid; hyoscine, another isomeride of atropine, of tropic acid united to pseudo-tropine. This drug has been said to be identical with scopolamine but the question is not yet settled. A number of other tropeines are known, most of them having been synthetically produced, but only one of these, homatropine, is of therapeutic importance and this mainly from an ophthalmological point of view. In this connexion it is interesting to note that when tropine, which is not very active physiologically, is combined with an aromatic acid it usually acquires active physiological properties. Thus tropine itself has no dilating influence on the pupil or marked action on the terminations of the vagus in the heart, but when combined with tropic or a similarly constituted acid all the atropine-like symptoms appear. It was at first thought that all aromatic acids possessing an alcoholic hydroxyl group when combined with tropine would induce this effect, but this is now known not to be the case. Hippuric acid affords us an example; hippuryl-tropine does not possess a physiological action like that of atropine. On the other hand, a few aliphatic tropeines, such as lactyl tropine, when given in large amounts produce an atropine effect—mydriasis and paralysis of the vagal terminations—and therefore, according to Gottlieb,[15] to whom most of our knowledge on this point is due, no conclusion can be drawn from the constitution of the tropeines as to their mydriatic or other actions.

As atropine and belladonnine and most of the other solanaceous alkaloids are not in themselves pre-eminently hypnotic, I shall not deal with them in these lectures. Hyoscyamine and hyoscine are the only ones we need consider. Both of these alkaloids, although so closely related to atropine chemically, are much more sedative to the brain. Hyoscyamine, as we have seen, possesses a similar composition, but it differs in optical activity and consequently to a slight degree in chemical structure; hyoscine differs from it slightly in chemical composition. Of the two hyoscine is the more sedative and the more reliable as a hypnotic. Indeed, it has almost totally replaced hyoscyamine for this purpose. The latter drug has often failed to induce sleep and it has produced more ill effects. As a type of the comparative effect of the two drugs we may take a series of cases reported by Wetherill.[16] He used the drugs in a series of mental cases and out of 268 administrations of hyoscyamine he only obtained a good night's rest in 73; in 68 a fair night's sleep followed and in 87 a poor one; and in 40 no sleep whatever was obtained. Thus in only 27·23 per cent. of cases was the result satisfactory; in 15 per cent. there was complete failure. Furthermore, unpleasant effects, such as dryness of the throat, vertigo, depression, and cardiac weakness, frequently followed. Hyoscine, on the other hand, in much smaller doses produced a good night's rest in 246 instances out of 348, and totally failed in only 14 cases. The ill effects also were less numerous, although of a similar kind. Serger's[17] results, however, are not quite so encouraging from a hypnotic point of view. Out of 914 administrations sleep was only produced in 11·5 per cent. of instances, although a calming effect was noted in 40 per cent. But there has been so much difference of opinion regarding the therapeutic value of this drug that it is difficult to come to any certain conclusions concerning it. In the published cases there has been so wide a variation in the dose that one is drawn to the conclusion that in many cases impure preparations have been used, and the same remark applies to experimental investigations; different observers have obtained very different results. From a chemical point of view Schmidt and Hesse have maintained that commercial hyoscine is not pure; that it is not hyoscine, but an impure scopolamine. This substance is

[14] Journal of the Chemical Society, vol. l., 1899, p. 20.

[15] Archiv für Experimentelle Pathologie und Pharmacologie, Band xxxvii., p. 218.

[16] American Journal of Insanity, vol. xlvi., p. 28.

[17] Allgemeine Zeitschrift für Psychiatrie, Band xlvii., p. 322.

not a tropeine but a scopoleine; instead of being broken up into tropic acid and tropine it is decomposed into tropic acid and scopoline; but this question of the identity of hyoscine and scopolamine cannot be regarded as settled. Ladenburg still maintains their individuality. Hyoscine hydrobromide, however, at first introduced into the German pharmacopœia, has been replaced by scopolamine hydrobromide and Kobert from pharmacological investigations has maintained their identity. Rotislaw,[18] a pupil of Kobert, has also given support to this view. But hyoscine seems to be slightly more powerful than scopolamine and this makes it rather difficult to accept the identity of the two. The most recent investigator, H. de Stella,[19] gives the relative toxicity as scopolamine, one; hyoscine, two; and atropine, seven; and he also describes a different effect on the circulation of the dog. Both drugs cause a rise of blood-pressure, but scopolamine is said to produce this by increasing the number of heart beats and hyoscine by stimulating the vaso-constrictor centre. But I doubt if stress can be laid on the latter condition and for the present the question must be left unsettled. There can be little doubt, however, notwithstanding the many ill effects attributed to its use and to its variable action, that hyoscine or scopolamine as a hypnotic has come to stay. For the treatment of insomnia in general it will probably never come into use, but its solubility in water and its applicability to hypodermic medication make it of extreme value in many conditions, particularly in the insane. In exhaustion from any cause and in advanced heart disease it is said to be contra-indicated.

The other drug which I have mentioned is pellotine. It is an alkaloid derived from the Anhalonium Williamsii and it was suggested as a hypnotic only a few years ago. There are two species or varieties of Anhalonium which have attracted attention during the last few years—Anhalonium Williamsii and Anhalonium Lewinii, or Mescal button. These have been investigated most extensively by Heffter.[20] He isolated pellotine from the Williamsii and mescaline, anhalonidine, anhalonine, and lophophorine from Anhalonium Lewinii. Mescaline in frogs produced decided cerebral depression and lophophorine distinct stimulation. Between the two in action are arranged pellotine, anhalonidine, and anhalonine. In these a narcotic stage is followed by a tetanic one. Anhalonidine produces the most prolonged narcosis and anhalonine the shortest. In warm-blooded animals, however, these effects were not observed and in experiments on himself no marked narcosis was produced. Anhalonidine (0·1 gramme to 0·25 gramme—1½ to 3¾ grains) caused some sleepiness and heaviness of the head, and anhalonine (0·1 gramme—1½ grains) produced slight sleepiness, but neither of these seem likely to prove useful as hypnotics. Pellotine is the only one of these alkaloids which has been put to practical use and this in only a few instances. This substance does not appear to be on the market. I have endeavoured to get some both for experimental investigation and therapeutic use but have failed. Jolly[21] and Pilcz[22] have recorded cases treated by this drug. In 58 administrations Pilcz obtained from one-third of a grain a satisfactory night's rest in half the cases; in 21 per cent. it failed. Jolly had to use larger doses and in excitable and delirious patients he only obtained a calming effect. Giddiness was also complained of. He gives its relative strength as pellotine 0·06 gramme; trional, one gramme; chloral hydrate, two grammes; and in conclusion states that the number of cases is too small to justify an opinion, but it deserves further trial. This, as far as I am aware, has not been forthcoming. Wilcox[23] is inclined to believe that it may be of considerable value.

There are still other drugs possessing hypnotic properties, such as Jamaica dog-wood and the various species of lettuce, but as these are not of much value and are but little used in the present day I shall pass on to the next division of my subject.

THE TREATMENT OF INSOMNIA.

This, notwithstanding its apparent simplicity, is one of the most difficult subjects in therapeutics. On the one hand, we have a series of drugs which given in sufficient doses will, we know, in the majority of cases produce a desired result; on the other hand, apart from any immediate ill-effects, we may make our patient a slave to a habit which in the long run will prove more disastrous than the insomnia itself. In the first lecture I expressed an opinion that drugs were often valuable in the treatment of sleeplessness, but I now hasten to add that they should never be used in a routine manner. In the case of insomnia the first great principle of therapeutics—the removal of the cause—should ever be kept in mind, the relief of the symptom being regarded as secondary to this. It is therefore necessary to inquire first into

THE CAUSES OF THE INSOMNIA.

But before dealing with this question a preliminary one—what constitutes insomnia?—must first be answered. For what is sleeplessness to one person may not be so to another. The average sleeping time of an adult is from six to eight hours, but Brunel and Alexander von Humboldt, and others I could mention, required much less time than this; other well-known men needed more. The amount of sleep, therefore, varies with the individual. It also varies with age. Infants sleep the greater part of their time. As they grow older gradually less sleep is required until adult life is reached; with the onset of old age more sleep is again needed. The amount of sleep varies, too, with the mental constitution of the individual—idiots and persons of weak intellect often sleep excessively—and with the quality of the sleep, profound and continuous sleep being much more refreshing than superficial and broken. Considering these variations insomnia may, perhaps, best be defined as a loss of the normal amount of sleep. This loss may occur at the beginning or towards the end of sleep or it may occur through constant awakenings. Thus some people go to sleep directly after getting into bed but awake every hour for several hours, sleeping well the rest of the night. Others, especially the gouty, awake punctually at 3 o'clock or 4 o'clock and are unable to sleep again, or, at any rate, until it is time to get up; others, as I have said, find great difficulty in getting off, but once asleep do not awaken until the morning. Occasionally, even, we see patients who assert that they do not sleep at all—a statement which must usually be accepted with reservation, although, as a rule, such cases are of serious omen.

Returning now to the causes of insomnia we shall find that they may be classed under four heads: (1) irritative causes; (2) toxic causes; (3) psychical causes; and (4) causes arising from change in the mode of life. Others have classified them differently. Germain Sée, for example, recognises nine divisions: dolorous, digestive, cardiac and dyspnœal, cerebro-spinal and neurotic, psychic, insomnia of cerebral and physical fatigue, genito-urinary, febrile, and toxic. This it will be seen is a symptomatic classification and does not bring us any nearer to the true causes of insomnia. The one I have adopted is simpler and, I think, more in accordance with etiological factors.

1. *Irritative causes.*—This class includes all forms of insomnia caused by pain and milder irritations, like uneasiness. In children teething, indigestion, worms, and so forth are frequent causes. Eye-strain—as in hypermetropia and astigmatism—the irritation of an eczema, the inconveniences produced by faucial adenoids and other similar conditions, are also etiological factors of insomnia. After surgical operations, even in the absence of pain, insomnia is not infrequent; and this may be due in part to the constrained position of the patient and some irritability of the wound and in part to toxæmic and psychical causes. Cold feet, vesical affections, asthma, bronchitis, and other diseases accompanied by troublesome, if slight, irritations—for example, cough or local and general pruritus—fall under this head. But the most important causal factor of this group is undoubtedly pain. In all diseases accompanied by pain—as neuralgia, sciatica, migraine, angina pectoris, aneurysm, locomotor ataxy, the various forms of colic, acute inflammation of the serous membranes (peritonitis, pleuritis, pericarditis, and meningitis), cerebral tumours and abscesses, malignant growths in various parts, diseased bone, acute and chronic rheumatism, osteo-arthritis, syphilis (the pains of which are often worse at night), and acute gout—sleeplessness is a symptom. All or many of these may include other etiological factors of insomnia, but the pain is the predominant one and is that which necessitates treatment.

2. *Toxic causes.*—A large number of diseases are due to, or are accompanied by, the presence of some toxic agent in the

[18] Dissertation, Dorpat, 1893.
[19] Archives de Pharmacodynamie, tome iii., p. 385.
[20] Cf. Archiv für Experimentelle Pathologie und Pharmacologie, Band xl., p. 383.
[21] THE LANCET, June 20th, 1896, p. 1760.
[22] Heffter: Archiv für Experimentelle Pathologie und Pharmacologie, 1894.
[23] Brit. Med. Jour., vol. ii., 1897, p. 856.

blood and such diseases are often attended by troublesome insomnia. Alcoholism and nicotism, the exanthems (measles, small-pox, and scarlet fever), enteric and other continued fevers, erysipelas, diphtheria, pneumonia, hepatic disorders (the lithæmia of Murchison), dyspepsia, and other gastric and intestinal disorders, rheumatism, gout, and Bright's disease are some of the conditions which may be mentioned under this head. The insomnia accompanying heart disease and altered vascular conditions (arterio-sclerosis, &c.) may also be included in this division, as its origin in most of such instances appears to be a blood poison. This form of insomnia is also partly due to a deficient blood-supply and possibly to an altered cardiac action. The sleeplessness induced by certain beverages, such as tea, coffee, and cocoa, requires mention here. These, especially if taken in a strong form and late at night, are powerful preventives of sleep in most people. Strychnine and other nervine tonics when taken regularly often cause sleeplessness during the earlier part of the night, but in certain conditions by improving the circulation and other functions they prove excellent hypnotics. Insomnia is also a symptom of certain drug habits, such as opium eating, morphinism, and cocainism.

3. *Psychical causes.*—Grief, shock, worry, and mental anxiety are among the most frequent causes of insomnia. In many persons a predisposing factor—a nervous temperament, neurasthenia, hysteria, or hypochondriasis—also exists and among such persons insomnia may easily be established as a habit. In students, overwork, especially if accompanied by irregularity in retiring to rest and the prospect of an examination, are the most frequent causes. Women at the menopause often suffer from insomnia, partly, perhaps, owing to the accumulation of toxic products not eliminated by the catamenia. The various forms of insanity, such as mania, melancholia, and general paralysis, are accompanied by insomnia, usually as a premonitory symptom, but there can be no doubt that continued loss of sleep is also a factor in the production of mental aberrations. Cases of severe chorea and of paralysis agitans are also marked by sleeplessness.

4. *Causes arising from change in the mode of life.*—Eating late dinners by those unaccustomed to them and change of climate, especially to high altitudes or in some individuals even to the seaside, sometimes give rise to temporary insomnia. Nurses who have been on night duty after changing to the day frequently suffer from sleeplessness; and the same condition occurs in other people with intermittent nocturnal occupations. Sometimes very simple changes in the mode of life of individuals will lead to insomnia. A patient under my care and his wife both slept very badly for the first three months after beginning to cycle. This may have been due to excessive fatigue or possibly to increased waste products in the blood or to both combined.

It is evident from the multiplicity of these causative factors that no one line of treatment can be suitable for all cases. As I have said, the first thing to do is to "remove the cause," therefore the treatment of insomnia resolves itself primarily into the treatment of the causative condition. If it is indigestion, acid or gouty dyspepsia, careful attention to the diet, the avoidance of tea and cooked or uncooked fruit, and of all substances containing vegetable acids, except in so far as these may be used in treatment, are essential. Fruit, owing to the acid it contains, is, I believe in many individuals, an unsuspected cause of indigestion, gout, and sleeplessness, and so are acid wines. In the gouty much butcher's meat, especially beef, should be prohibited, and white fish, poultry, and game should be taken in its place. Fried fat such as that on the outside of fried fish should also be avoided. An alkaline bitter before meals, an occasional mercurial at bedtime, followed by a saline aperient the next morning, and in the gouty colchicum and magnesia or sodium salicylate should be prescribed. Sometimes a dose of Gregory's powder at bedtime or a mild carminative is of value. One of my patients found that a little peppermint water taken at bedtime gave him a better night than any hypnotic. In the insomnia of the aged and the overtired, and in that due to cardiac and vascular disease, nux vomica and strychnine are beneficial remedies. They tone up the circulatory system, remove indigestion and flatulence, and act directly on the cerebral cells. In cardiac disease and in neurasthenics with low arterial tension digitalis and the other cardiac tonics may be resorted to. In anæmia iron, nux vomica, and sometimes digitalis, are required; and in a similar way other diseases which are causal factors of insomnia must be treated. But often this method does not suffice. The removal of the cause does not bring back refreshing sleep. The reason is that the cerebral cells have assumed an irritable condition, and it is necessary to depress their activity to bring them back to a more normal state. In other words, we have to break the habit of sleeplessness; and it is here that hypnotics are of such great value. The best of these for any individual patient will vary according to his condition. There is no absolutely safe hypnotic, but experimental investigation and clinical experience show that paraldehyde stands in the first rank. Chloralamide and chloralose are safer but slower in action than chloral hydrate, and of the two I decidedly give the preference to chloralamide. The sulphones are also valuable and in practice I have found sulphonal the most valuable of the three. But as a whole the bromides seem to be the least harmful and in simple cases, uncomplicated by other diseases, it is my practice where I think a hypnotic is necessary to try them before resorting to any other drug.

But leaving these general indications and coming to the special therapeutics of insomnia we may divide this into non-medicinal and medicinal. The first of these, as it is more or less common to the treatment of all insomnias, I shall deal with first. In all cases, where practicable, the bedroom ought to be in a quiet part of the house, well ventilated, and of moderate temperature. Light should be easily excluded and the apartment scantily furnished. The bed should vary according to the custom of the individual—for young and middle-aged adults a firm mattress is the best, but for the old a softer bedding may be necessary. The covering should be light and warm, but in the use of pillows no general recommendation can be made. Some people sleep better with the head raised, others with the head on a level with the body. In heart disease it will be found necessary to raise it; but as a rule this arrangement may be left to the choice of the individual. For broad-shouldered people Whitla recommends the wedge-shaped pillow used by the Germans. Some invalids find much refreshment from the use of two beds—one for the day and the other for the night. In individual cases various means must be resorted to for the purpose of inducing sleep and often simple ones suffice. Thus some people read themselves to sleep, some people count, other people, like Southey, think of some monotonous discourse. One of my patients used to hang his feet out of bed for some time and then put them in again. Walking about naked or taking a cold or tepid bath is often useful. Massage, especially of the abdomen, the thighs, and the legs, as in Dr. Eccles's method of treating insomnia, is sometimes advantageous. This method is believed to produce temporary anæmia of the brain by causing a determination of blood to the manipulated parts and it may be further aided by a hot compress to the abdomen. In the case of cold feet rubbing them vigorously or the use of a hot bottle or a footbath with mustard in it is beneficial; or, again, a hot sitz-bath may be used. Attention should also be given to the condition of the stomach. As a rule a light supper is the best and for many, and especially those who awake in the middle of the night, a little hot milk or meat juice containing a small amount of alcohol is helpful. The evacuations should also be attended to and the bladder especially be relieved.

Sleeplessness from overwork, and especially literary work, requires mental rest and change of air and scene. Temporary exposure to the cool air of the bedroom or the wet pack or a bath is often of use, and so is a glass of whisky-and-water at bedtime, especially in those unaccustomed to the use of alcohol; but if the insomnia continue it is necessary to give a mild hypnotic, such as 20 grains of sulphonal or 30 or 40 grains of bromide of potassium, to break the habit of sleeplessness. Capsules containing 30 minims of turpentine given at bedtime are sometimes beneficial in the insomnia of overwork and worry. The drug acts as a stimulant and derivative and is stated to be most successful in plethoric cases. No beverages containing caffeine should be taken after breakfast.

In nervous and hysterical women, and especially in women at the menopause, the bromides are very useful. I have long been in the habit of giving a mixture of bromide—either of potassium, sodium, or ammonium—tincture of sumbul, and tincture of hop, in camphor water at the climacteric; and it has helped to remove the insomnia as

well as the mental depression and flushing heats so common at this period.

The sleeplessness of the insane requires careful management. In the early stages of acute mania the bromides, chloral, hyoscine hydrobromide, and other sedatives are useful, but a hot bath at a temperature of 104°F. and cold water simultaneously poured upon the head are most efficacious in inducing sleep. In melancholia, where arterial tension is usually high, paraldehyde in doses of from 40 minims to 90 minims or even more is a valuable hypnotic, and so is morphine, but a 1-grain dose of erythrol tetranitrate by reducing arterial tension will frequently act better than anything else. In mild cases of delirium tremens sleep usually comes on after a time whatever treatment be adopted; in the more severe cases chloral and bromides, alone or in combination, are beneficial. Paraldehyde is recommended by some physicians. Opiates may be given, but in most cases hyoscine is probably a more efficient remedy. Among the medical officers of the American army 20 grains of powdered capsicum in the form of a bolus is the favourite hypnotic for this complaint. I have had no practical experience of this prescription and cannot therefore express any opinion of its value as a mode of treatment. Cerebral depressants should be given as little as possible and the treatment should be confined chiefly to feeding and tonic measures.

In pneumonia sleep usually comes at the crisis, but where this has not occurred I have occasionally seen a hypnotic—such as chloralamide or paraldehyde—turn the scales in favour of the patient. In pleurisy and most other serous inflammations from five to 10 grains of Dover's powder usually conduce to sleep mainly by relieving the pain. A hypodermic injection of morphine may be given with the same object in view. In bronchitis chloral and chloralamide are safe hypnotics and, as a rule, opiates are to be avoided, as these, as I have pointed out, depress the respiratory centre. The sleeplessness of asthma is relieved by remedies which cut short an attack, such as chloral hydrate, the fumes of Himrod's and other asthmatic powders, the hypodermic injection of morphine, or in some cases from a five-grain to a 10-grain dose of citrate of caffeine. Bromides are also useful and so is paraldehyde, which both relieves the asthma and causes sleep. A change of locality even to another part of the same town often succeeds. In one case the removal of a student from Downing College, Cambridge, to a house across the street brought relief and in another of my pupils the change from Caius College to a house in another part of the town brought to an end a most troublesome attack of asthma with its attendant sleeplessness.

The insomnia of heart disease is benefited by digitalis, strophanthus, strychnine, and other cardiac tonics, but in some cases it is necessary to resort to morphine either by the mouth or, still better, hypodermically, as first suggested by my colleague Professor Allbutt. Paraldehyde and chloralamide are in my experience most useful. Ice to the head is recommended by Morison where the vital forces are not too low or the temperature subnormal. It often produces sleep rapidly with a more regular cardiac action. Heat may possibly answer in other cases presenting a subnormal temperature. In chronic Bright's disease insomnia is occasionally very troublesome. Eliminants such as aperients should be tried and if they do not succeed chloral hydrate may be given. The drug is safer in kidney than in heart disease, the reduction of blood-pressure being usually beneficial than otherwise. Morphine and hyoscine hydrobromide subcutaneously injected have been recommended in obstinate cases, but their employment requires great caution. Erythrol tetranitrate, by reducing arterial tension, often acts as a charm even when sedatives have failed; and in one of my patients thorough rubbing of the skin by means of a flesh-brush induced sleep and very materially relieved the restlessness of the disease. When pain is the causal factor of insomnia morphine is usually the best remedy and this should be pushed until relief is obtained. In cases of neuralgia, locomotor ataxy, and so forth, some of the synthetic analgesics—phenazonum or phenacetin—are of value. These drugs, as I have previously stated, act also as hypnotics in cases where there is no pain. Calcium chloride is a valuable remedy in the insomnia due to pruritus.

In conclusion I must again thank you, Mr. President and Gentlemen, for the patience and attention with which you have listened to these lectures. The subject I have chosen is a most difficult one and required a much abler head than mine to deal satisfactorily with it. Nobody is more conscious than myself of the imperfection of what I have presented to you, but, as I observed at the beginning, the subject of sleep, sleeplessness, and hypnotics has for some time occupied my attention, and although I may have had nothing particularly novel to say I hope that my remarks will at any rate stimulate some of my younger hearers to extend our knowledge of the subject.

Erratum.—The description of Fig. 15 in THE LANCET of July 8th, 1899, p. 77, should read: "Effect of 0·1 gramme of morphine acetate on *blood-pressure* [not on "respiration"] when injected intravenously."

DIABETES IN A CHILD AGED THREE YEARS; ALMOST COMPLETE DISAPPEARANCE OF THE SUGAR DURING AN ATTACK OF JAUNDICE.

BY J. H. SEQUEIRA, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN; MEDICAL TUTOR TO THE LONDON HOSPITAL.

THE occurrence of diabetes in young children is well recognised. Külz[1] collected from the literature on the subject 111 cases in which the patients were under 15 years of age. Redon[2] had 32 cases under his own observation. Stern[3] in an excellent paper gives details of 117, and still more recently Wegeli[4] collected 108. The communications of the two authors last mentioned contain a very full bibliography. Of their cases about 60 were children under five years of age. I have therefore only ventured to put this case on record as it presents points of particular interest. The most remarkable feature was the almost complete disappearance of the sugar during an attack of catarrhal jaundice, while there was no such change in the amount excreted during an attack of diphtheria. It is also worthy of note that the case was overlooked at two hospitals. For the six months preceding death the patient was under continuous observation, so that there is an unusually complete record of the condition of the urine. For the history and the careful daily analyses during this long period I have to tender my grateful thanks to Mr. Allan Hair, late house-physician to the North-Eastern Hospital for Children.

A girl, aged three years and two months, was admitted to the North-Eastern Hospital for Children under my care on Sept. 20th, 1898. Her mother stated that six months previously the child had suffered from "influenza," and that since that illness she had complained of thirst and had passed large quantities of urine. It was also noticed that the child lost flesh. The prominent symptom, however, was constipation, for which in the August before she had been taken to a children's hospital. Under treatment as an out-patient she was temporarily relieved. In September she was taken to another hospital and was made an in-patient. She was then suffering from prolapse of the rectum and constipation. It was believed that a fissure of the anus was the cause of this condition, and I believe that the sphincter was stretched. The urine, however, was not examined, and for the second time the diabetes was overlooked. On her return home, as the child was evidently getting worse, Mr. Cuthbert Dixon of South Hackney was called in and he made an examination of the urine and found that it was loaded with sugar. He was kind enough to send the patient to me and she remained under my care till her death. Careful inquiry failed to elicit a history of diabetes in any member of the patient's family.

On admission the patient was found to be a fair-haired, blue-eyed girl with a bright malar flush, clear conjunctivæ, and dry and almost vermilion red lips. The surface of the tongue was dry, glazed, and beefy in appearance. There was no noticeable odour about the breath. The skin was rather harsh and dry, but these were not marked features. The muscles of the limbs were flabby, but there was generally a fair covering of subcutaneous fat. There was no evidence of disease of the thoracic organs. The abdomen was soft and

[1] Gerhardt's Handbuch.
[2] Du Diabète Sucré chez l'Enfant.
[3] Archiv für Kinderheilkunde, 1890, Band xi.
[4] Ibid., Band xix.

flat. The edge of the liver was palpable one finger's breadth below the costal margin, but the spleen could not be felt. The urine was acid, its specific gravity was 1040, it contained no albumin but a large quantity of sugar. The temperature was 98° F., the pulse was 116, and the respirations were 20. The weight of the patient was 25 lb. From Sept. 22nd to 29th no restrictions were made as to the diet, so that a correct idea of the natural tendency of the disease could be obtained. The child was allowed milk and water *ad libitum*, bread-and-butter, meat, fish, potatoes, and rice pudding. It was soon evident that the disease was progressive. The child cried constantly for drink and passed urine very frequently (as much as 2500 cubic centimetres in 24 hours), while the sugar reached 11 per cent. It is noteworthy that even at this time there was no enuresis, which is a not uncommon symptom. The patient would wake at frequent intervals at night and cry for attention and in consequence a very complete record of the amount of urine passed was obtained. On the 29th some changes were made in the patient's diet. All the bread was toasted and the potatoes and milk-puddings were discontinued. The distress was at once relieved, the thirst was less, the quantity of urine was diminished, and less sugar was excreted. This modified diet was continued until Oct. 8th and during this time the child lost 1 lb. in weight. The bowels were confined and enemata were required from time to time. A prolapse of the rectum of the size of a walnut came down occasionally but it was easily reduced. On this date strict diabetic diet was begun and the meals were as follow: for breakfast the child had bacon, egg, gluten bread in slices toasted and buttered, weak tea with cream and saccharin; for lunch she had Soy biscuits; for dinner she had meat or fish, green vegetables, calf's-foot jelly, beef-tea, or milk; for tea she had egg lightly boiled, weak tea with cream and saccharin; and for supper she had Soy biscuits with beef-tea. The effect was remarkable. The patient became quite comfortable and she ate, drank, and slept well. The intense thirst diminished, the quantity of urine fell at once to 1000 cubic centimetres in 24 hours, and in a few days fell again to from 500 to 600 cubic centimetres, while the sugar fell to 4 per cent. Several attempts were made to vary the food by substituting almond bread and biscuits and Soy for the gluten bread, but the child seemed perfectly contented, and, indeed, preferred the gluten bread, which after a time was her sole carbohydrate food. On the 24th fresh honey was added to the diet. The bulk of the sugar in honey is lævulose and it has been shown that this form of sugar has much less tendency to increase glycosuria than ordinary sugar.[5] For the first two days the quantity of urine was slightly increased, 1250 cubic centimetres and 900 cubic centimetres being passed in the 24 hours, and the sugar reached 5 per cent. After that the quantity excreted fell to the former level. Drugs were then tried and arsenic (two minims of Fowler's solution three times a day) had a definite effect. The quantity of urine fell to about 500 cubic centimetres a day and the sugar dropped to 2·75 per cent. and on one occasion to 2·2 per cent. The weight, which had fallen to 23½ lb., rose to 24¼ lb. under the arsenic treatment. Unfortunately diarrhœa set in and the arsenic had to be stopped. Bismuth soon controlled the diarrhœa, and reliance was placed for a time upon diet alone. There is very little of interest to record until Jan. 7th, 1899, when the child was evidently not so well. Her appetite was poor, her face was flushed, and the temperature, which had hitherto been normal or subnormal, rose to 102·8°, and she was restless and awake all night. The sugar fell to 2 per cent. On the 9th the liver was found to be slightly enlarged and the face was unusually sallow. The evening temperature was 102°. On the 12th jaundice was noticed. The liver was palpable two fingers' breadth below the right costal margin. On the 13th there was still greater enlargement of the liver which was tender, and the jaundice was deeper. The temperature was 101°. The urine was bile-stained and acid in reaction, its specific gravity was 1020, and the sugar was 1 per cent. At the height of the jaundice the sugar fell to 0·7 per cent. and the specific gravity to 1016. During this time the quantity of urine passed was from 635 to 775 cubic centimetres per day. By the end of January the jaundice had quite disappeared and the liver had returned to its normal size. There was now 4 per cent. of sugar and the quantity of urine passed in the 24 hours reached from 900 to 1100 cubic centimetres. Codeine (quarter-grain doses) and tincture of opium (one-minim doses) were tried but failed to improve the results obtained by diet alone. During March the child appeared to be failing. She got gradually weaker and took less interest in her surroundings, but the weight never fell below 23¼ lb. On the 24th the temperature rose to 100·2° and the pulse was 120. Five days later the patient complained of sore-throat and examination of the fauces showed a small patch upon the left tonsil. A swabbing was made and a pure culture of diphtheria bacilli was obtained. There was a little hoarseness, but at no time were there severe laryngeal symptoms. The temperature was 102°, the pulse was 156, the respirations were 36, and the sugar amounted to 3 per cent. There was no albuminuria. Acetone was present. On the 31st the child became drowsy and she died on the next day in coma. The excretion of urea while the patient was under observation varied from 3 to 4 per cent. There was no evidence of peripheral neuritis at any time. The knee-jerks were obtained with difficulty throughout. There were no pulmonary complications and the optic fundi, which were examined regularly, were normal.

The necropsy was unfortunately incomplete, as an examination of the brain was not permitted, and owing to the delay in obtaining the sanction of the parents for the post-mortem examination the pancreas was in such a condition that minute changes were unrecognisable. There were, however, no gross signs of disease. The kidneys showed slight cloudy swelling, the wall of the urinary bladder was hypertrophied, while the liver and the bile-ducts presented no abnormality.

The question of diagnosis calls for no remark. As soon as the condition was thought of an examination of the urine made it certain. Heredity, which has been shown by an examination of the recorded cases to be a prominent feature in the diabetes of the young, played, so far as is known, no part in this instance. The effect of diet is well shown by the history of this case. The most interesting feature is, of course, the remarkable diminution of the sugar and the consequent drop in the specific gravity of the urine during the attack of jaundice. It cannot be assumed that the obstruction of the bile-duct was the cause of this, for extensive cirrhotic changes in the liver are unaccompanied by glycosuria. It appears to be the result of the febrile state and it is observed in pneumonia and other conditions attended by pyrexia. The febrile state depends no doubt upon the presence of toxins in the blood, and these bodies in some unexplained way seem to prevent glycosuria. The incidence of the diphtheria undoubtedly precipitated the fatal coma as does the occurrence of other acute diseases in the diabetic. It is curious that the sugar did not disappear as it did in the previous pyrexial condition, but this may perhaps be due to the inability of the diphtheria toxin to diminish the formation of sugar. In this connexion it is important to note that Hibbard and Marrisay [6] have found that there is a transitory glycosuria in many of the severe cases of diphtheria, and that this condition of the urine is present in most of the fatal cases. It is often accompanied by albuminuria. Moreover the injection of antitoxin is occasionally followed for a few days by a slight glycosuria. The action of toxins and antitoxins upon the formation of sugar appears to be well worth experimental investigation.

Welbeck-street, W.

[5] Solis Cohen: International Clinics, 1894, vol. iv., series 3. R. Saundby: ibid. Van Noorden: Twentieth Century Medicine, vol. ii.

[6] Journal of Experimental Medicine, 1899, vol. iv., p. 137.

OBSERVATIONS ON TUBERCULOUS AND SYPHILITIC DISEASES OF THE EYE.

BY LACHLAN GRANT, M.D., C.M. EDIN.,
SURGEON TO THE GESTO HOSPITAL, ISLE OF SKYE.

MUCH has lately been written about tuberculosis both as to its spread and as to its frequency in various parts of the country, rural and urban. A branch of this subject of some interest is the relative frequency with which tuberculosis affects certain of the organs of the body. During the past few years while engaged in hospital and private practice I have taken notes of all the affections of the organ of vision which came under my observation and it is remarkable that amongst 2100 cases observed not one

was positively diagnosed as being directly due to the action of the tubercle bacillus. No cases of tuberculous disease of the conjunctiva, of tuberculous keratitis, of tuberculous iritis, of miliary tubercles of the choroid, or of inflammation of the optic nerves sometimes seen in patients affected with tuberculous meningitis were met with. Cases were observed to which the term "strumous" was applied, such as strumous blepharitis and strumous ulcers of the cornea. These terms, however, were applied in a general way as in other affections, meaning rather an inflammatory condition of the affected tissues occurring in individuals of weakly looking appearance and having an apparent predisposition to the development of the tubercle bacillus, but without the bacillus causing, as far as was known, the actual inflammation present. Two cases of a doubtful tuberculous nature were noted. Both of them occurred in girls. In one of them the sclerotic was much injected and swollen at parts, especially underneath the upper eyelid. This condition had lasted for 13 months and did not improve under the ordinary treatment for inflammation of the sclerotic. The other girl was affected with lupus vulgaris of the face and in the centre of her right cornea there had developed a peculiar, clear, bleb-like elevation, which was thought might possibly be a lupoid affection of that tissue. But it may be said that none of the cases showed the characteristic sign of tuberculous infection which we meet with so frequently in other organs of the body—namely, progression, going on to disintegration of structures affected. This fact shows the great immunity which the eye enjoys from tuberculous disease and the strong natural resisting powers which its structures present to the invasion of the tubercle bacillus. This local power of resisting the attacks of the bacillus must be much more highly developed in the eye than in the majority of the other structures of the body. In the other departments of surgery we meet with tuberculous infections frequently, as diseases of glands, bones, and joints, and tuberculous disease of the larynx is not so very uncommon. In fact, diseases caused by the tubercle bacilli fill a good half of the beds on the surgical, and also many on the medical, side of all general hospitals.

Why, then, one may ask, is tuberculous disease of the eye so relatively rare? This is not an easy question to answer. We know that tubercle bacilli along with other micro-organisms are present in the air in many places and that inhalation of the bacillus from the air is one of the usual modes of infection of tuberculosis in man, so that the bacillus will frequently come in contact with the external surface of the eye, landing in its conjunctival cul-de-sac. This local immunity, then, does not depend on the absence of the infecting agent. Again, the eye is one of the organs of the body most subject to traumata and inflammatory or catarrhal affections of its coats. Most of us can remember having suffered at some time or other from the presence of a foreign body or of having had a blow on the eye or conjunctivitis. Yet these various conditions, which no doubt lower the vitality of some of the tissues of the eye, do not predispose to the bacillus gaining a foothold and setting up local tuberculous disease. Here, also, the eye differs from many of the other organs of the body, for not infrequently traumata and inflammatory conditions predispose to local tuberculous disease. For example, in tuberculous disease of the knee-joint the "inner condyle[1] is much more frequently the seat of tubercular disease than the outer, probably because it is more liable to strain," and Treves[2] states that a "feature in tuberculosis is the trifling nature of the irritant or lesion, whereby the mischief may be in the first place localised." Then, in catarrhal affections of the respiratory mucous membranes in individuals affected with the tuberculous diathesis one is anxious lest pulmonary tuberculosis should follow. The rarity, then, of tuberculous eye disease cannot be due to the absence of local predisposing causes.

An important factor in preventing the growth of the bacillus when it has reached the eye is that the organ of vision is exposed to much bright sunlight, and Koch, as well as other observers, has demonstrated that the direct rays of sunlight are fatal to the bacillus of tubercle. Thus, any bacilli present should be rendered more or less harmless by the action of this important agent. Another agent much valued nowadays in the treatment of pulmonary tuberculosis is fresh cold air and of this the eye gets plenty. The adjective "cold" has been used with air because the bacilli do not grow well with a low temperature, preferring a temperature of from 80° to 120° F. And, as Ransome has pointed out, a lowered temperature will probably have some action in hindering the growth of the bacilli or in making them less virulent. Recent sanatorium experiences at Nordrach point to cold and not artificially warmed fresh air as all important in the cure of tuberculous affections of the lungs.[3] The organ of vision then is very favourably situated for the full play of these potent natural agents.

The comparative infrequency of tuberculous infections in the eye may also be partly due to the fact that the movements of the eyes and eyelids tend to dislodge the bacilli from their surfaces. Then the secretions, conjunctival and lacrymal, which are constantly being secreted and flowing away, will also help to remove the bacilli from the eye before they have had time to gain a foothold and multiply and to proceed to attack the contiguous structures. But in addition these secretions probably have some special action on the bacilli themselves, exerting an inhibitory action on their growth or rendering them more or less harmless. Thomson, Hewlett, and others in a series of experiments demonstrated that the allied nasal secretions have some such bactericidal action. Again, the surface tissues of the conjunctiva and cornea must present a formidable barrier to the advance of the bacilli. Does this resistance depend on any histological peculiarity of these tissues? It would seem so. The anterior epithelium of the cornea is composed of stratified nucleated cells of many layers and the conjunctival epithelium is largely composed of stratified prismatic epithelial cells. Now, Baumgarten has shown that if the epithelium covering the body, which is also largely composed of stratified cells, be inoculated in its superficial layers with tubercle bacilli local tuberculous disease does not result and that the bacilli require to be introduced through the skin into the subcutaneous tissues before tuberculous infection occurs. This may be due to the density of the stratified tissues or perhaps to the presence of something inimical to the growth of the bacilli in these cells.[4] In lupus vulgaris, which is a form of tuberculosis attacking the skin, caused probably by the bacillus gaining an entrance through an abrasion, the bacillus when settled there does not have the same tendency to develop and cause disintegration of the structures affected as in the other parts of the body—for example, in the larynx or in the lungs. It seems as if the epithelial coverings of the eye had a similar, and perhaps somewhat greater, resisting power to the local development and spread of the tubercle bacillus.

An observer[5] has stated that he was much impressed at the relatively small number of cases of pharyngeal tuberculosis as compared with laryngeal tuberculosis. As these affections are in some points analogous to, and in other points different from, eye tuberculosis it might be interesting to briefly compare them. The pharynx (like the eye) is protected by stratified epithelium and the larynx and bronchi by an epithelium which is not to the same extent stratified and which is surmounted by a row of ciliated epithelial cells. These latter cells are naturally more delicate and are not so easily replaced after, say, an inflammatory attack as ordinary epithelial cells. They do not thus present such a dense front to the bacilli. Such an epithelial covering, then, would be more liable to infection by the bacilli gaining a suitable landing-place. The fact, again, that the pharynx is frequently cleansed by gargles, coughing, and the rapid passage of infected material in swallowing[6] will prevent the bacilli from remaining for any length of time on its surface. In the eye also I have shown how the bacilli are dislodged. The larynx, on the other hand, differs from the eye and pharynx in that it seems to act as a

[1] Stoker on Experiences of Excision of the Knee-joint for Tubercular Disease, Practitioner, January, 1896.

[2] Treves's System of Surgery, vol. i., p. 343.

[3] It seems reasonable to suppose that the pathogenic bacteria—such as, for example, the influenza germs—will be kept more active and virulent when given off into hot than into cool atmospheres; in fact, that so-called comfortable artificially heated places act as incubators for these microbes. This may to some extent account for the recent widespread epidemic amongst our legislators, as in a recent issue of the British Medical Journal it was stated that the air in the House of Commons was too hot.

[4] Should this be so it might be possible to obtain a bactericidal extract from these cells of one of the carnivorous animals more resistant to tuberculous infection for trial in tuberculosis. In carcinomatous affections also an extract of the skin of a young pig might be tried, as McFadyean states that "cancer is very rare in this animal." (Practitioner, April, 1899.)

[5] Simpson: Journal of Laryngology, Rhinology, and Otology, September, 1896, p. 136.

[6] Clifford Allbutt's System of Medicine, vol. ii., p. 32.

harbourer of the bacilli, especially its ventricles,[7] and they cannot be so easily dislodged. Further, the laryngeal mucous membrane has not the great exposure of the eye to sunlight and fresh cold air. The absence of these two agents will no doubt have some influence in favouring the development of the bacilli in that region, as we know that sunlight is destructive to them and that they prefer a temperature of about the body heat to grow well, and such a temperature is present in the larynx. It is thus evident that the larynx is more favourably situated and constructed for the harbouring and for the consequent development of the infecting agent of tubercle than are the pharynx and the eye.

The organ of vision has still another line of defence, that which Metchnikoff and his followers believe to be the first line of defence in dealing with bacteria generally—namely, phagocytic destruction of the bacilli by the leucocytes and connective-tissue cells. Probably, also, the nutrient fluids circulating in the tissues of the eye may have some action in hindering the growth of the bacilli. So that if the bacillus, in spite of the adverse conditions to its advance already considered, enters the tissues through some lesion of the conjunctival or corneal epithelium it will reach the phagocytic cells in a more or less weakened condition and will thus be more liable to be devitalised by the action of these cells and fluids. While we thus see that the external surface of the eye is not very liable to tuberculous infection by the bacillus gaining an entrance from without the interior of the eye is sometimes affected with diseases due to the tubercle bacillus. If we inoculate the anterior chamber of the eyes of guinea-pigs, which animals seem very susceptible to tuberculous infection, local tuberculosis follows in about 10 days. In man, when internal tuberculous disease occurs, the bacilli probably reach the parts in the interior of the eye by way of the blood or lymph streams, this being evidence of that peculiar diathesis in which the tissues are only slightly resistant to the action of the bacilli, whereby the latter are enabled to gain the upper hand and so circulate in the chief vascular channels. But, as already mentioned, no cases of tuberculous iritis, miliary tubercles of the choroid, or optic neuritis, sometimes seen in cases of tuberculous meningitis, were observed, so that tuberculous diseases of the interior of the eye were equally uncommon in my series of cases.

It is evident, then, that the eye has good defensive arrangements against the onset of the bacilli of tubercle, presenting a natural and formidable barrier to their advance. As is frequently stated, the nidus is evidently unfavourable for their growth and so further multiplication and spread of the bacilli are arrested. Local resistance apparently plays an important rôle in determining the occurrence of tuberculous infection, as seen in the skin and in our organ of vision. It would appear as if these local defensive arrangements were almost of a perfect nature in our organ of sight. In fact, tuberculous infection of the eye seems to me to occur so rarely that the organ may be considered "naturally immune," thus resembling the pharynx, thyroid body, pancreas, and ovary. In marked contrast to this apparent immunity of the eye from tuberculous infection in my observations was the very great frequency with which it was affected by the virus of syphilis, which virus caused many serious affections of that organ. I traced in a consecutive series of 1272 cases 37 patients with diseases of the eye resulting from syphilis, congenital or acquired. These were made up of the following: interstitial keratitis, 19 cases; syphilitic iritis, nine cases; and choroidal affections, nine cases. This number does not probably represent all the syphilitic cases, many more being suspected in patients having old corneal opacities, iritic adhesions, obscure choroidal inflammations, optic atrophy, and eye affections the result of intra-cranial diseases.

The eye seems to be one of the organs of the body which is most frequently attacked by syphilis. It is thus evident that the resisting powers of the eye to syphilis, as with the rest of the body, is practically *nil*. In trying to discover the reasons for this greater frequency of syphilitic diseases in the eye as compared with tuberculous affections in that organ it might be instructive to look into the nature of the two diseases and also into their various modes of producing infection. Syphilis is a chronic infectious disease, being thus similar to tuberculosis which, as a rule, is also slow in its progress. We know that the disease must be caused by a micro-organism of a parasitic nature. At present, however, not much is known regarding its habits or nature. This micro-organism differs from the tuberculous one in that it is incapable of producing the disease by aerial infection, but it is far more contagious than the germ of tubercle, syphilis being one of the most contagious of diseases. This has often been proved by frequent accidental inoculations from patients suffering from primary or secondary syphilis.[8] The most minute quantities of blood from such a syphilitic subject have, or the serum secreted from an abrasion has, proved fully contagious and produced the complete disease in another person. This is not the case, to the same extent anyway, with the serum and blood of a tuberculous patient, and it is well known that secretions containing the infecting agent of tubercle frequently come in contact with the tissues of healthy persons and yet but rarely produce general tuberculous disease. Again, if we contrast the hereditary aspect of the two diseases we find that in syphilis the virus is transmitted by the parent to the offspring either at the date of conception—i.e., by sperm or germ transmission—or at a later date, when the fœtus may be infected through the placenta by the syphilitic virus. In the communication of this infecting agent by the spermatozoid or ovum it is mechanically attached to one or other of these bodies.[9] This is rarely the case with the virus of tubercle, which in nearly all of the offspring of tuberculous parents is not transmitted to the child by the spermatozoid or ovum, but only a predisposition to its development at some future time, the actual bacillus which is the cause of the disease being but on the rarest occasions transmitted.[10] And Woodhead in an article on the Bacteriology of Tuberculosis states:[11] "Hereditary tuberculosis may be left out of account, for although there may be a few cases of congenital tuberculosis—i.e., of tuberculosis contracted in the womb and due to the passage of the tubercle bacillus from the mother or membranes to the child or animal—all statistics point to the fact that tuberculosis is a disease which is contracted after birth—a most comforting knowledge for families in whom tuberculosis has been rife."

From the foregoing it will be evident that when syphilitic infection occurs the virus does not tend to remain more or less localised like the tuberculous virus but invariably circulates throughout the whole system, even early in life, the virus finding the tissues of probably all non-syphilitic individuals a suitable nidus for its development, so that the infecting agent will easily reach the eye, where no doubt it will multiply and in some as yet unknown manner produce the various affections of the tissues of that organ which are classed as syphilitic. On the other hand, the blood of a tuberculous person does not seem in most cases to have the bacilli circulating in the same extensive way as the virus of syphilis. The tissues of many individuals seem to offer greater resistance to the onset of the tuberculous infecting agent, and general dissemination of the bacilli is seen more frequently when the local tuberculous disease has opened into a blood-vessel and thus allowed the circulation of the infecting agent. The bacilli therefore only comparatively rarely reach the internal eye tissues. This may to some extent help to demonstrate why syphilitic infections in the eye are so much more frequent as compared with tuberculous infections of that organ.

In concluding this paper it might be useful to consider the reason why the syphilitic virus does not give rise to the disease in healthy individuals by aerial infection, like tuberculosis. In the mouth-secretions of syphilitic patients the virus is often present and is frequently expectorated on to pavements and floors, so that when the sputum dries the virus will be liberated and, like the infecting agent in tuberculous sputa, get freely blown about and so come in contact with other people's tissues. It cannot, however, reach them in an actively infectious state. The infecting agent is apparently rendered harmless whenever it has left the system and been exposed to nature's disinfectants, light and air. Perhaps the oxygen in the latter is the chief agent inimical to the development of the virus.[12] The syphilitic virus does not appear to be a typical anaerobic organism, as it readily multiplies in the blood-stream which carries a large quantity of oxygen. Another interesting point to consider is why the

[7] J. Horne: British Medical Association Meeting, Edinburgh, 1898.

[8] Clifford Allbutt's System of Medicine, vol. ii., p. 596.
[9] Edinburgh Medical Journal, April, 1898, p. 321.
[10] Hamilton's Pathology, 1894, vol. i., p. 153.
[11] Practitioner, June, 1898, p. 596.
[12] One would suppose that the oxygen gas treatment of wounds infected by the poisons of syphilis and tetanus would be a useful adjunct to general treatment of these diseases. This may have been tried already, although it has not come under my notice.

virus of syphilis is so easily conveyed by the spermatozoa and ova. May it not be, as has been stated,[13] that the virus of syphilis "is a very small bacillus"? There is in addition to this the probability that the virus is possessed of some means by which it can mechanically attach itself to these body cells, such as by a glutinous secretion of its cell envelope or conceivably that it has minute spinous processes like some pollen grains; or, again, by its having flagella which would allow of its motility. By these means the bacillus would also more easily become attached to, or entangled with, other protoplasmic cells, such as the phagocytes, and if so it would also, in addition to allowing a general spread of the infecting agent, more readily permit of the so-called phagocytic action of these cells. Perhaps as well as being an exceedingly minute bacillus the syphilitic organism may have a very delicate protecting cell envelope which would permit of its being more speedily affected by agents inimical to its growth, such as air, and the medicinal remedies—mercury and iodide of potassium. These hypotheses may to a certain degree account for the fact that syphilis is not such a fatal disease and the same hypotheses might hold good with some of the other pathogenic bacteria.

Isle of Skye.

MUSCULAR HYPOTONIA IN EPILEPTICS.

BY GEORGE E. RENNIE, M.D., M.R.C.P. LOND.,
LATE PHYSICIAN AND PATHOLOGIST TO THE PRINCE ALFRED HOSPITAL, SYDNEY.

IN normal conditions the muscles are kept in a condition of slight tension which is maintained in whatever physiological state they may be in—i.e., whether at rest or relaxed or acting synergically with other muscles, and of course when contracting under the influence of the will. When a muscle—for example, a flexor of the elbow—is at rest the muscle fibres are kept tense, like a string kept taut between two fixed points. When the elbow is flexed by passive movement the flexor muscle, instead of being flabby and loose, is still kept taut although the muscle is taking no active share in effecting the flexion of the limb at the joint or in maintaining it in that position. So, too, we know that when a group of muscles contracts the muscles with opposing actions also contract slightly, so that they are not in a condition of relaxation but of slight tension. The advantage of this condition of tone is obvious since it enables muscular movements to be effected with a minimum initial expenditure of muscular energy. But this condition is maintained outside the sphere of our consciousness; it is quite involuntary on our part and as such must be maintained by some reflex influence exerted upon the muscle centres. We know that if the anterior cornual cells of the spinal cord or the motor nerves be diseased the corresponding muscles become flaccid, and if experimentally a motor nerve be cut the muscle at once elongates. This clearly indicates that some impression or stimulus has been passing to the muscle, and when the nerve is cut this stimulus ceases and the muscle relaxes. Similar muscular relaxation with intact cornual cells and motor nerves occurs if the posterior nerve roots be cut experimentally. Hence we must assume that muscle tone is, in part at any rate, maintained by reflex influences exerted upon the muscles along the motor nerves from the motor cells in muscle centres and excited by sensory stimuli arising from the periphery. If this be true then we should expect that any break in this reflex arc would be followed by a loss of tone in the muscle connected with that arc. Loss of muscle tone, or, as Frenkel has called it, "hypotonie musculaire," is now a well-recognised feature in the symptom-complex of tabes dorsalis. In tabes there is invariably disease of the posterior nerve roots with varying degrees of anæsthesia of the skin and the deeper structures and thus a loss of conduction of sensory impressions from the periphery to the motor nerve cells. This will explain, in part at any rate, the muscular hypotonia seen in this disease, though it is quite possible that the condition of lowered nutrition in the muscles has some share in its production. In tabes this hypotonia is met with in an extreme degree and more or less in all the muscles of the body, of the trunk as well as of the limbs. For example, in a case of tabes which I saw recently in a woman, aged 30 years, an in-patient at the National Hospital for the Paralysed and Epileptic, Queen-square, under the care of Dr. Bastian, there was advanced optic atrophy and the patient could stoop down and place the palms of her hands flat upon the ground while keeping her knees fully extended without the least inconvenience. When in bed she could bend forwards so as to place her head on the bed between her legs. A similar condition of relaxation of muscles existed in the limbs, so that the degree of passive movement was only limited by the bony and ligamentous configuration of the joints. But while in tabes hypotonia appears generally to involve all the muscles it is not so in all cases of this disease; it may be a localised condition. I have already referred to the existence of hypotonia in Friedreich's ataxy—a disease analogous to tabes in the disease of the posterior nerve roots but in which there is not the same nutritional change in the muscles. In disease of the anterior cornual cells, as anterior poliomyelitis, or in disease of the motor nerves, there is of course paralysis of the corresponding muscles, and if these be all the muscles of a limb then the limb hangs flaccid and flail-like; here it is not possible to differentiate between the loss of tone and the actual palsy. We have seen, then, that muscular hypotonia can exist where there is disease of either the motor or sensory part of the reflex arc, and I wish now to draw attention to its existence in cases where there is reason to suppose that the break in the reflex arc occurs in the motor nerve cells in the cortex. Thus it occurs as an inter-paroxysmal condition in certain cases of epilepsy. I will briefly record three cases.

CASE 1.—A boy, aged 10 years, had been on several occasions an in-patient at the National Hospital for the Paralysed and Epileptic, Queen-square, under the care of Dr. Bastian. He had been suffering from epileptic fits for a number of years, and when admitted again recently he had a succession of fits each day. There was no evidence of any gross intracranial or spinal disease. Mentally he was very dull and stupid, and could not be got to answer questions. He was somewhat emotional, and was dirty in his habits. He had had no fit for two days before I examined him and ascertained that the following passive movements (amongst others) could be performed easily without causing the slightest pain or inconvenience. His head could be extended on the trunk so as to bring the occiput almost in contact with the spine; it could be flexed so as to bring the chin on to the sternum; it could be rotated and the chin placed on the top of either shoulder, and even further, so that he could look almost directly behind him. He could not bend the trunk sufficiently to place his head on the bed between his legs, nor could he touch his toes with his fingers while keeping his knees fully extended. In the lower extremities the leg could be flexed on the thigh so as to bring the heel against the buttock of the same side and also flexed still further so that the heel could be placed above the umbilicus. The leg could also be flexed and the foot placed on the outer side of the trochanter of the same side. Similar wide range of movements in the arms was observed, and when holding the forearm or the leg and shaking it the hand or foot, as the case may be, was seen to swing about in every direction as if it did not belong to him. But with this condition of relaxation of muscle there was also a slight degree of resistance on first attempting these passive movements, but this was readily overcome. This is interesting in view of the fact that in this case all the deep reflexes were well marked, knee-jerks, ankle-jerks, and even ankle-clonus being obtained. There was no actual paralysis and all voluntary movements were performed with a moderate amount of muscular power.

CASE 2.—A lad, aged 17 years, had been subject to epileptic fits for several years and when admitted into the National Hospital for the Paralysed and Epileptic under Dr. Bastian he was having one daily. He was extremely dull and stupid and was dirty in his habits. There was no evidence of any gross disease of the nervous system. The fits were bilateral and genuinely epileptic in character. In this case the trunk muscles did not show any marked degree of hypotonia, but the limb muscles were as flaccid almost as in the first case. In this case also there was some resistance on first attempting the movements, which, however, was easily overcome and the extreme passive movements were performed without the least degree of pain or discomfort. All the deep reflexes were active and ankle clonus was obtained.

CASE 3.—A boy, aged 11 years, had been subject to fits for three years before admission to hospital. The fits occurred generally every two or three days. There was no

[13] Hutchison, jun.: Treves's System of Surgery, vol. i., p. 135.

evidence of any gross disease of the nervous system. There was some mental deterioration but it was not so marked as in the other cases. The fits were bilateral. There was no very obvious hypotonia in the muscles of the arms or trunk but in the legs it was marked. He could flex the leg at the knee and bring the sole of the foot across the back of the buttock on the same side; this could be done in either leg easily. Flexion and extension of the ankle were also very free; the dorsum of the foot could be brought into the same plane as the front of the leg. The sole of the foot could be inverted to a considerable extent with the leg kept extended. In this case, too, the reflexes were all active. An interesting fact in the history of this patient is that he himself had noticed the possibility of performing these movements only since he had been suffering from fits.

Control observations were made on other patients—e g., on a boy who was suffering from functional tremor of the left arm. There was no trace of this flaccidity of muscle. In other cases of epilepsy, too, in which the fits had only occurred at considerable intervals and in which there was no sign of mental deterioration it could not be observed. In another case in which the fits had been absent for several months a succession of fits occurred in the course of 12 hours and an observation made six hours after the last fit and also before the first fit showed no sign of this condition.

A condition of flaccidity of muscle exists in clowns and contortionists, but in them it appears to be the result of careful training from infancy and it cannot be compared to a condition of muscle developing in the course of disease. The cases above recorded resemble each other in the fact that the disease had existed a long time, fits having occurred very frequently with no long interval of freedom from them. The patients also all showed marked mental deterioration and were all young, and it is in this class of case that the condition will be found to exist in any degree. It is also noteworthy that while in tabes the passive movements can be performed without the slightest resistance in all the above cases on first attempting the movements a certain amount of resistance had to be overcome, though it was very slight; and the co-existence of muscular hypotonia with, at any rate, active reflexes is interesting.

While post-epileptic phenomena have been the subject of numerous observations such observations have mostly been made at comparatively short intervals after the fits. Thus Sir W. Gowers says: "Reflex action is lost for a few seconds after the fit. The stage of loss is succeeded by temporary increase of the myotatic irritability, so that the knee-jerk is increased and there is ankle clonus. This lasts only a few minutes and then passes away. These phenomena are the result of temporary exhaustion of the centres concerned." Ross says: "After an epileptic attack there is complete muscular relaxation, but as the patient is at the same time unconscious the degree of paralysis present cannot be estimated. Even after consciousness is regained general muscular feebleness often remains for a time which, though not called paralysis, is really paralytic in nature."

It would appear, then, that under certain circumstances and in a certain class of epileptics which I have indicated above this condition of muscular relaxation referred to by Ross may become a more or less permanent interparoxysmal phenomenon and is due to a state of exhaustion of the motor nerve cells—i e., of the cortical cells. A condition of exhaustion or defective activity of the cortical nerve cells is presumed to exist in cases of neurasthenia, and it is of interest to note that in some cases of this class at any rate in which no evidence of gross organic disease can be detected muscular hypotonia can be demonstrated. A female patient, aged 30 years, at present in the National Hospital for the Paralysed and Epileptic, Queen-square, under the care of Dr. C. E. Beevor, shows this condition well marked in the head, trunk, forearm, and hand muscles, but not in the legs; the deep reflexes are all normal. In neurasthenia, as in tabes, there is often impairment of digestion and a general lowered state of nutrition in which the muscles are involved. As one element in the maintenance of muscle tone is the inherent vital activity of the protoplasm of the muscle cells any impairment of muscle nutrition may lead to some loss of muscle tone. So that in neurasthenic conditions muscular hypotonia may depend, in part at any rate, both on impaired muscular nutrition and on exhaustion of cortical nerve cells.

In conclusion I have to thank Dr. Bastian and Dr. Beevor for permission to refer to the cases under their care at the National Hospital for the Paralysed and Epileptic, Queen-square.

ON ANTHROPOLOGICAL WORK IN ASYLUMS, WITH A PRACTICAL SCHEME FOR CONDUCTING THE SAME IN ADULTS.

BY EDWIN GOODALL, M.D., B.S., M.R.C.P. LOND.,
MEDICAL SUPERINTENDENT, JOINT COUNTIES ASYLUM, CARMARTHEN.

THE co-existence of symptoms of psychical degeneration and evidences of abnormality in bodily conformation has long attracted notice, but has been the subject matter of scientific reflection only in comparatively recent times. Lelut in his "Cadre de la Philosophie de l'Homme" (1844) gave due weight to this important correlation: "Dites-vous donc bien et réciproquement, que partout où vous voyez un changement dans le corps, vous avez à en chercher un dans l'intelligence. Dites-vous que vous avez à établir cette corrélation dans toute l'échelle, et toutes les dégradations de l'entendement." In 1854 Stahl worked at the relationships between anomalies of the skull and mental disorders. Morel (1857) occupied himself not only with this relationship, but with the wider question of the relationships between anomalies of the body generally and psychical disturbances. To Morel and to Esquirol are commonly attributed the merit of having first brought into association with each other by practical demonstration the evidences of physical and psychical degeneration: "Dans l'état actuel de progrès l'étude de l'homme physique ne peut s'isoler de l'étude de l'homme moral."[1]

Of late years Lombroso's investigations amongst criminals have stimulated interest in the subject, but the signs of degeneration as they exist in the insane have only rarely and in a minor degree been the subject of study. Recently, however, the correlated study of physical and mental stigmata has received considerable attention, especially in Italy and in the United States. In the Ninth Annual Report of the State Commission in Lunacy of the State of New York, recently issued, an account is given of the work of the admirable Pathological Institute of the New York State Hospitals for the Insane, one of the departments of which is devoted to anthropological work. The importance of this branch of investigation is thoroughly recognised by the New York State Commission in Lunacy. It is to be hoped that the pioneer work of the Anthropological Institute of the New York Asylums may stimulate to similar investigations conducted on a similar scale in this country.

I do not know that a systematic anthropological examination of patients as they are admitted is made in any of our asylums, but there is much to be said in extenuation of the omission, having regard to the duties of asylum medical officers and the conditions under which they work. The necessary observations and measurements require a great expenditure of time and conjoint labour. A leading difficulty in anthropological work generally, which is experienced in asylums also, is the acquirement of a normal standard. A worker in a particular asylum would need to take his normal standard from amongst healthy persons residing in the districts from which the asylum draws. Where the population supplying the asylums is a mixed and changing one the difficulty in acquiring a normal standard is of course very great, perhaps insuperable; but in the more rural parts of the country the difficulty is minimised, and in this case reliable results are to be looked for. It would probably be very advantageous if results were collated by workers in asylums drawing from adjoining districts, so that a mass of information might be obtained.

Although this article is concerned with the investigation of the stigmata of degeneration as they occur in the living insane it is of course to be remembered that abnormalities occur in various organs and structures which can only be examined after death, such as the brain and viscera generally and the muscular and osseous systems. One of the objects of an anthropological department in connexion with asylums would be the collection of post-mortem evidences of deviations from the normal. The chief objects of a systematic study of the persons of the insane with reference to the occurrence of degenerative stigmata I take to be: (1) to show whether these stigmata are more common and more numerous in the insane—apart from cases of

[1] Traité, Paris, 1857.

obvious congenital defect—than in the sane; (2) to make a division into grave and slight stigmata by ascertaining which are commoner in the more depraved types of insanity and which in the more hopeful; (3) to ascertain whether there is such a frequent occurrence of particular stigmata in particular forms of mental disorder as to justify a correlation; (4) to ascertain the relationships between the number and nature of the signs and the degree of inheritance of neurotic disorder: where such inheritance is denied, or where the history is difficult to ascertain, a study of the physical condition may be expected to give useful information as to inheritance; and (5) to obtain a guide in prognosis in persons whose history raises the apprehension of mental disorder and in those who have become insane: where the insanity has supervened in an individual said by his relatives to have been previously normal, and some accidental cause for the disorder is assigned, the discovery of physical stigmata may materially alter the prognosis.

For some time I have been engaged in the endeavour to draw out a practical scheme for the systematic anthropological examination of asylum inmates, and this has been for many months in use. In making out a scheme for a general investigation one requires to avoid undue elaboration in special directions, and it is equally important that regard be had to comprehensiveness as far as time will permit in a general investigation. In anthropological work there are many directions in which one can specialise. The cranium, the ear, and the palate, for example, can be made the subject of elaborate study, and for these purposes there will always be special investigators to work after the methods of Rieger, Benedikt, Schwalbe, and others. But we must also have the results of a general survey; a general examination is necessary, based upon a scheme comprehending the entire surface of the body. As regards such a scheme I should advocate one drawn up by an authoritative body as most likely to be efficient and to be generally adopted. I have not much desire and no expectation that the scheme which I personally use should be followed by anyone; but I am in hopes that individual efforts may promote interest in this question and lead ultimately to the promulgation of an authoritative scheme for asylum use in which the best of what is of individual origin will doubtless find a place. In making out the subjoined scheme I have of course been indebted to work already done, and I have found especially useful, and am indebted to, the writings of E. Schmidt, Bertillon, A. Meyer, and Peterson. The two former I especially recommend for instruction in technique. Various measurements affected by the state of nutrition of the individual and various descriptions which would demand a ready coöperation on the part of the subject—both of which would be looked for in a scheme for the examination of sane persons—have been omitted. So also have measurements and descriptions intended for purposes of identification. As regards instruments, I employ (1) a two-metre rule starting from the floor, fixed vertically against a smooth wall of polished matchboard (this is for the various vertical measurements, with the exception of that for the height of the crown of the head above the lower limit of the trunk, taken in the sitting position, for which I employ a special metre rule and stool, after Bertillon); (2) a portable wooden square to slide alongside the rule with moveable steel arm with which to take the vertical measurements; (3) Benedikt's steel callipers for head-measurements; (4) a specially-constructed large steel callipers with two pairs of arms on opposite sides of the measure, one pair curved and the other straight, for trunk, limb, and face measurements; (5) an ordinary metre rule and steel tape measure and drawing compasses; (6) a specially-constructed instrument for taking the facial angle; and (7) lead-strips for the cranial curves (to be transferred to millimetre paper). It is well to have a small callipers, with straight arms for the ear measurements, but (4) answers for this purpose. Landmarks are best indicated with an Indian ink pencil. A very practical general anthropometer is the "traveller's anthropometer" of Dr. Garson which is figured in "Notes and Queries on Anthropology."

To carry out the scheme of work an assistant is necessary, and preferably a medical colleague, as errors associated with the personal factor are thereby better corrected. My colleague, Dr. Peers MacLulich, assistant medical officer at Carmarthen Asylum, is assisting me, and I am indebted to him for various practical suggestions in the application of the scheme. An attendant or a reliable patient to control the subject under examination is often useful. Subjoined is the scheme. (Details of practical application are too numerous for insertion.)

MEASUREMENTS (Metric System).

Height of the crown of the head above the ground (*a*).
Height of the upper margin of the external auditory meatus above the ground (*b*).
Height of the margin of the chin above the ground (*c*).
Height of the brain-case by subtracting (*b*) from (*a*).
Height of the head by subtracting (*c*) from (*a*).
Height of the upper margin of the sternum above the ground (*d*).
Height of the centre of the umbilicus above the ground.
Height of the upper margin of the symphysis pubis above the ground (*e*).
Length of the trunk in front by subtracting (*e*) from (*d*).
Length of the upper arm (tip of the acromion to the head of the radius).
Length of the forearm (head of the radius to the tip of the styloid process).
Length of the hand (level of the tip of the styloid process to the tip of the middle finger).
Height of the anterior superior iliac spine above the ground.
Height of the upper margin of the great trochanter above the ground.
Height of the knee-joint above the ground (from the groove between the femur and the tibia).
Height of the tip of the internal malleolus above the ground.
Height of the seventh cervical process above the ground.
Breadth of the shoulders (outer edges of the acromion processes).
Reach (from tip to tip of the middle fingers, the face to the wall).
Distance between the anterior superior iliac spines.
Greatest distance between the iliac crests (difficult in stout persons).
Greatest distance between the great trochanters.
Chest circumference at the armpit level (in mid-respiratory state).
Circumference of the knee, the ankle, and the wrist (at fixed points).
Length of the thumb (from the metacarpo-phalangeal joint).
Length of the middle finger (from the metacarpo-phalangeal joint).
Breadth of the hand at the knuckles (closed hand).
Length of the foot (to the tip of the great toe).
Greatest breadth of the foot.
Height of the crown of the head from the seat (sitting posture).
Greatest antero-posterior diameter of the skull (from the glabella to the furthest occipital mid-point).

* Circumference of the cranium (through the previous two points).
Naso-occipital arc (root of the nose to the lowest point of the external occipital protuberance).
Naso-bregmatic arc (root of the nose to the bregma) (*f*).
Naso-lambdoidal arc (root of the nose to the lambda) (*g*); more often obtainable than the former.
Bregmato-lambdoidal arc, (*f*) from (*g*).
Binauricular arc (between fixed points on the anterior rim of the external meatus).
Auriculo-bregmatic radius (from the same points to the bregma).
Auriculo-bregmatic arc.

Greatest transverse diameter of the cranium.
Binauricular diameter (from the same points as the arc).
Empirical greatest height of the cranium (from last and binauricular radii).
Lead-strip curves of the cranium: antero-posterior (over the glabella and occipital protuberance); horizontal (over the glabella and furthest occipital point); and transverse (corresponding to the greatest diameter).
Length-breadth index of the cranium.
Greatest breadth across the malar bones.
Greatest breadth between the external margins of the orbits.
Breadth between the external angles of the eyes (*h*).
Breadth between the internal angles of the eyes (*i*).
Sum of the breadth of the eyes, (*i*) from (*h*).
Breadth of the mouth.
Breadth between the angles of the lower jaw.
Distance from the angle of the lower jaw to the chin-point, right and left.
Distance between the central point of the lower margin of the chin and starting line of hair.
Distance between the chin-point and the root of the nose.
Distance between the chin-point and the angle between the nose and the upper lip.
Distance between the chin-point and the mouth-fissure.
Distance between the external angle of the eye and the angle of the mouth, right and left.
Greatest height of the orbits, right and left.
Distance between the root of the nose and the post-glenoid process of temporal bone, right and left.
Distance between the chin-point and the post-glenoid process, right and left.
Distance between the nose-tip and the post-glenoid process, right and left.
Distance between the external angle of the eye and the post-glenoid process, right and left.
Linear measurement from the angle between the nose and the lip to the post glenoid process.
Direct measurement between the same points.
Breadth of the nose at the nostril attachment.
Facial angle, right and left.
Breadth between the temporal ridges, just above the external angular process of the frontal bone.

DESCRIPTIONS.

(*a*) *Anatomical.*

General form of cranium.—(Macrocephalus, micro-, chaemo-, lepto-, scapho-, oxy-, plagio-, trigono-, trocho-cephalus, &c.). Viewed from above, behind, laterally; any local characteristics of the cranium.

* Note abundance or reverse of hair. The value of these measurements is diminished by their being taken over hair. A deduction is sometimes made for the latter

Forehead.—Inclination of the frontal line; gradations from receding to prominent or bulging. Prominence of the frontal bosses. Height: gradations from very little to very great; usually measure. Width: same gradations. Degree of prominence of the superciliary arches. Degree of prominence of the frontal sinuses.

Face generally.—Shape: long and narrow, short and broad, &c.; lozenge-shaped. Asymmetry (see measurements). Proportion between the forehead and the lower part of the face. Inter-ocular space: abnormally large or small.

Nose.—(1) Shape: (*a*) concavity of the root—size of; (*b*) general shape of the ridge. Cave: rectilinear, convex, cave-sinuous, rectil.-sinuous, vex-sinuous. (Bertillon); and (*c*) inclination of the lower edge. (2) Dimensions (to eye): (*a*) height (root to the nostril attachment)—gradations, little to great; (*b*) projection, same gradations; (*c*) width (between wings); and (*d*) large or small, in proportion to face. (3) Peculiarities, as tapering, thick, bilobed, shape and formation of the nostrils, deviation of the nose, &c.

Lips.—In profile; height of the upper lip; little, medium, great; relative prominence of the lips; thickness of: thin, thick, "blubber." Upper protuberant; lower pendant; median furrow of upper accentuated; pouting or compressed (permanent or habit).

Mouth.—Pinched, gaping, normal; corners elevated, depressed, horizontal.

Cheek-bones.—Prominence of.

Chin (in profile).—Inclination of: receding, medium, projecting. Ball of: absent, medium, large. High, medium, low.

Eye.—Palpebral fissure: little or much slit, horizontally; little or much open, vertically; direction of fissure, horizontal, oblique; Mongolian characteristics. Upper lid: covered, uncovered, patient looking forward; drooping. Balls: sunken, protruding. Eyebrows (Bertillon): heads near, distant, united; low, high (middle eyebrow to the centre of the eyeball); rectilinear, arched, oblique (and direction, if last); short, long; narrow, wide. Hairs: scanty, abundant; long, short; blonde or dark. Eye-lashes: long, short; abundant, scanty, or absent. Iris: general colour of, flecks on, chromatic asymmetry, coloboma, &c. Eye anomalies: strabismus, nystagmus, &c. (Refractive errors probably constitute a special study.)

Ear.—Maximum length and breadth. Length of implantation. Length from the nose-lip angle to the upper and to the lower limit of implantation. Insertion: perpendicular, oblique. Separation from head: in whole or in part. Clinging to head: in whole or in part. Supero-posterior contour: acute, square, round. Helix (regarded in three parts, anterior, superior, and posterior): small, medium, large, absent, flat. Helix: open, intermediate, adherent; regular, rumpled. Fossa of: shallow, deep; broad, narrow; Darwinian nodosity, or tubercle present. Antihelix: convex, concave, intermediate (on vertical sagittal plane); superior division of: accentuated, medium, *nil*; any peculiarity of its branches; fossa of: small, large; deep, shallow. Antitragus (general direction of): horizontal, intermediate, oblique; edge of: rectilinear, projecting, intermediate; everted, intermediate, erect; small, medium, large. Tragus: large, medium, small; posterior edge bifurcated. Concha: small, large, deep, shallow, traversed. Lobule: square, intermediate, gulfed; blending, intermediate, separated; channelled, dimpled; elevated, intermediate; small, medium, large. Mobility of ear (volitional).

Hard palate.—Cast if possible (saving of time to take several different cases at one sitting. The casts can be detached from the moulds and shaped subsequently). General observations *re* shape of vault and of alveolar margin. Note cleft.

Soft palate and uvula.—Arches of the former symmetrical. Uvula: size, shape, whether bifurcated, and whether deviating to one side when the palate is raised.

Tongue.—Any peculiarities in size and form.

Teeth.—Large, small, irregular, deformed, misplaced, projecting. Diastema, numerical augmentation of, &c. Note great development of the superior central incisors with small lateral incisors (or absent).

General contour of the head.—Prognathic, naso-prognathic, orthognathic. Lower jaw prominent.

Fronto-nasal profile.—Rectilinear, angular, parallel (or nearly so), semilunar.

Occiput.—Flat, bulging.

Skin.—Anomalies of, such as nævi, pigment spots, albinism, colouration of.

Hair.—Amount on head, face, trunk, and limbs. Premature greyness; excess of local growth; coarse, fine; straight, wavy, curly. Glabrous chin and cheeks in men. Growth on unusual parts. Asymmetry in growth at any part. Low growth on forehead. Colour of hair: black, coal-black; dark brown, chestnut; yellow, flaxen; red (auburn).

Nails.—Abnormalities of.

Limbs.—Congenital contractions, paralyses, atrophy, luxations and joint anomalies; abnormalities in size or appearance (as feminine types in men). Form of hands, feet, and digits: excess of digits. Note size of great toe and dimensions of space between it and second toe, with unusual mobility of first.

Body generally.—Giantism, dwarfism, asymmetry. State of breasts and genitalia. Buttocks asymmetrical. Femininism, masculinism. Infantile traits. Deviations of spine, chest-conformation, &c.

(*b*) *Physiological.*

Anomalies of motor function.—Tremors, tics, nervous muscular movements, &c.

Anomalies of sensory functions.—Deaf-mutism; in some subjective examination will be possible—as to hyper-, an-æsthesia, neuralgia, migraine, &c.

Anomalies of speech.—Stammering or defective speech; character of voice.

Miscellaneous.—Incongruity between age and appearance; left-handedness; state of circulation.

(*c*) *Psychical.*

If alienation, nature of; or other abnormality, as eccentricity, moral delinquencies, egoism, imperative ideas, excessive emotionalism, mysticism, hysteria, epilepsy, intellectual or other precocity. Note facial expression. Note evidences of degeneration in history, family and personal, including evidence of anomalies in sexual life of patient (impotence, sterility, perversion, menstrual anomalies), and dispositions to diseases.

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Carmarthen.

A CASE OF CHRONIC INVERSION OF THE UTERUS REDUCED BY AVELING'S REPOSITOR.[1]

BY JOHN B. HELLIER, M.D. LOND.,

LECTURER ON DISEASES OF WOMEN AND CHILDREN, YORKSHIRE COLLEGE; SURGEON TO THE HOSPITAL FOR WOMEN AND CHILDREN AT LEEDS.

CHRONIC inversion of the uterus is one of the rarest of its morbid conditions. Acute inversion is so rare that it occurred but once in 190,800 labours at the Rotunda Lying-in Hospital, Dublin, and not once in 250,000 labours at Vienna. But for acute puerperal inversion to become chronic it must remain unreduced, the patient must survive the danger of a speedy and fatal termination which this involves, and involution must take place. So excessively rare is such a sequence of events that a specialist may see tens of thousands of gynæcological cases without meeting with a single instance. Hence no man can accumulate much personal experience of the treatment of chronic inversion, and it is important that every case should be published.

A woman, aged 24 years, was admitted into the Hospital for Women and Children, Leeds, on April 11th, 1899, complaining of "flooding." She stated that she was delivered of her second child on Oct. 4th, 1898. The labour was difficult and tedious and chloroform and the forceps were used. Five days after labour she had bearing-down pain and a tumour presented at the vulva which she supposed to be "something which had to come away" and she tried to get rid of it by straining. The medical attendant was now summoned. He informed me that he reduced the inversion completely without anæsthetic and with no serious difficulty, passing his hand into the uterus. He also told me that at the labour there was neither traction on the cord nor post-partum hæmorrhage. After the reduction the patient had no further pain and he had made no further examination. She was free from the bearing-down pain but she had a good deal of leucorrhœa which was somewhat offensive. At the end of three months from that time she had four days' normal menstruation and at the end of the fourth month she had a week of excessive loss. On March 31st she began to "flood" and continued to lose profusely till she was admitted to the hospital. She consulted her medical man, who examined her and advised her to enter the hospital.

On admission the patient was very anæmic, but was fairly well nourished. The vagina was occupied by the inverted uterus. This felt like a polypus hanging from the cervix by a narrow pedicle. On making traction on the tumour it could

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on May 5th, 1899.

be drawn outside the vulva and then all trace of the os was obliterated. On bimanual examination—recto-abdominal and recto-vaginal—the cup of inversion could be easily felt with the appendages passing out of it. The surface of the tumour was soft and vascular, the mucous membrane being somewhat tumid and bleeding very easily. The patient was ordered iron and antiseptic vaginal douches. On April 17th an attempt was made under ether to reduce the inversion by taxis. Various expedients were tried unsuccessfully, and it was decided not to persist in efforts at rapid reduction but to rely upon continued elastic pressure. On April 25th Aveling's repositor was applied in accordance with Dr. Aveling's directions. The cup employed had a diameter of one and a half inches and it held its place well without any packing. On the next day the uterus was unreduced and the instrument was re-applied. On April 27th after 51 hours of application the fundus was found to have gone up. The cup of the repositor had followed the fundus and was firmly grasped by the cervix. The attempt to remove the repositor caused so much pain that ether was again administered and the repositor was withdrawn by tilting the cup and using a blunt curette as a button-hook. It was now found that there was still partial inversion of the fundus which felt exactly like a polypus within the os internum. On making steady digital pressure on the tumour and counter-extension on the cervix with three pairs of vulsella, reduction was easily completed. A No. 20 Hegar was passed into the uterine cavity which now measured three and a half inches. The cavity was well washed out and was packed with iodoform gauze for 24 hours. For two or three days there were slight rise of temperature and some abdominal tenderness, with some discharge of an offensive nature from the endometrium. On May 5th the uterus measured two and a half inches and the patient was practically well, but the discharge continued to be offensive for some days. The inversion was thus reduced after 29 week's duration. The amount of pressure used was about three pounds. The general condition of the patient on leaving the hospital was much improved.

The history of this patient bears out the statement that if a case of inversion survives the stage of involution it may give little trouble till menstruation is re-established and then it causes danger from "flooding." Details of the history of onset are wanting. Spontaneous inversion seems to have taken place. Probably the reposition made was not quite complete and relapse occurred by subsequent uterine action.

The diagnosis of such a case of complete inversion is easy if one remembers to make a diagnosis. But the inverted uterus bears such a close likeness to a polypus that some operators have cut it off first and made their diagnosis afterwards. But the diagnosis of *partial* inversion must, I am convinced, be exceedingly difficult in some cases. When in my case the uterus was half reduced it was exceedingly difficult on bimanual examination to recognise the cup of inversion, and if I had not seen the uterus completely turned inside out I should have found it very hard to distinguish it from a case of polypus uteri with partial inversion, and I am not surprised to read that very competent men have sometimes mistaken the one for the other.

There can be no doubt that *the* treatment for chronic inversion is sustained elastic pressure. There seems to be a growing opinion that amputation of an inverted fundus or panhysterectomy for the same condition is hardly ever necessary. Dr. Aveling's repositor seems to be the very best instrument for the purpose. Dr. G. E. Herman goes so far as to say that it has not been known to fail and that an inverted uterus ought never again to be amputated. How far such a universal negative can be sustained I cannot venture to say, but it is certainly one of the triumphs of surgery that a condition which at one time was considered incurable except by amputation is now capable of such successful treatment that the only question is whether the mutilative operation is ever justifiable.

If in any case all other methods of reduction fail I think that a trial should be made of Küstner's operation. As I cannot find a clear account of this in modern English text-books a brief abstract of Küstner's description may be interesting. He has performed it, so far as I know, but once. It was then successful in a very obstinate case. 1. He made a transverse incision through the posterior vaginal cul-de-sac into the pouch of Douglas. 2. He inserted his index finger, sought for adhesions, and tried to reduce the inversion but unsuccessfully. 3. He made an incision in the middle line from the surface of the posterior wall of the uterus right through to the peritoneum, using as a guide the index finger inserted into the cup of the inversion. The incision began four-fifths of an inch from the extreme fundus, was four-fifths of an inch long, and ended four-fifths of an inch from the os externum. 4. He then found it easy to reduce the inversion. 5. By vulsellum forceps he forcibly retroflected the uterus and drew it into the vaginal incision so as to enable him to suture the uterine wound from the peritoneal side. 6. He then closed the vaginal wound. The patient did well. This operation seems worthy of trial if necessity arises.

In regard to the literature of the subject I have found the most valuable contributions to be the following: 1. Dr. John Green Grosse's classical essay.[2] Such an essay as this, so exhaustive, luminous, and scholarly, it is a treat to read. The illustrations are excellent. 2. Observations on this subject in Dr. Matthews Duncan's Clinical Lectures. 3. Dr. Aveling's lecture,[3] containing directions for the use of the repositor. 4. Küstner's paper.[4] 5. Dr. Galabin also gives some useful hints in his "Diseases of Women."

Leeds.

THE X RAYS IN PROGNOSIS OF PULMONARY TUBERCULOSIS.

BY HUGH WALSHAM, M.A., M.D. CANTAB., M.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

IN October of last year a short paper by me was published in THE LANCET on the use of the x rays in diseases of the chest. I there pointed out that the x rays might possibly be found useful in prognosis in cases of pulmonary tuberculosis. The following case which has recently been under treatment in the hospital is, I think, worthy of record.

A schoolboy, aged 11 years, was admitted into the City of London Hospital for Diseases of the Chest, under the care of Dr. Harrington Sainsbury (who has kindly given me permission to make use of the notes of the case) on Oct. 17th, 1898. There was no family history of tubercle. The patient had had a cough for about a year, which had become worse during the last six months. Expectoration was slight; there were no hæmoptysis and no night sweats. He had been wasting for the last three months. His evening temperature was 103·4° F. The physical signs before admission were as follows. There were dulness to percussion, tubular breathing with whispered pectoriloquy, and fine consonating râles at the apex of the right upper lobe. The left apex was apparently free. The following skiagram (Fig. 1) was taken before the patient's admission to the hospital. It shows massive consolidation of the apex of the right upper lobe, but gives no evidence of cavitation which the physical signs led one to believe existed. Although the left apex on auscultation was apparently free, the skiagram shows distinct evidence of commencing consolidation in that position. The patient remained under observation 12 weeks in the hospital. The treatment consisted in the administration of cod-liver oil and creasote in gradually increasing doses up to 40 minims of the latter with iron and arsenic. The general health of the patient improved somewhat while in the hospital. The temperature gradually fell during the first three weeks to nearly the normal level, but never quite reached it, the evening temperature always being slightly above 99°. The patient gained six pounds in weight. The physical signs indicated some clearing up of the right apex; the physical signs being *nil* at the left apex. The skiagram (Fig. 2) is from the chest of the same patient after his discharge from the hospital. From a therapeutical point of view it is very disappointing. It shows a steady progress of the disease downwards in the left upper lobe and also in the right lower lobe, notwithstanding the auscultation signs on the left side remained negative.

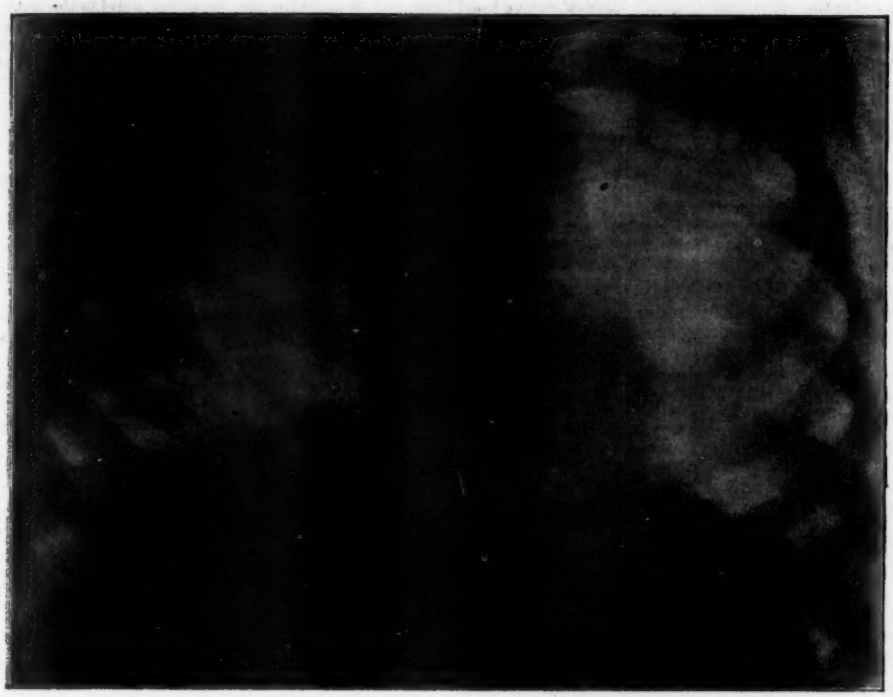
It is in cases such as this that I think the x rays will be found useful in prognosis. The patient is still under observation as an out-patient, and is in spite of treatment

[2] Transactions of the Provincial Medical and Surgical Association, vol. xiii., et seq.

[3] Brit. Med. Jour., 1876.

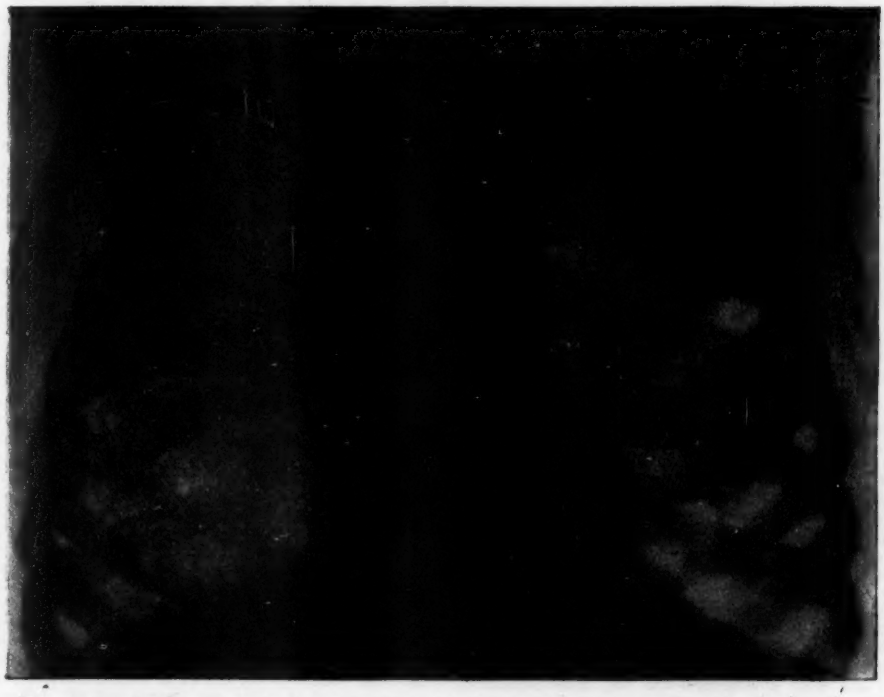
[4] Centralblatt für Gynäkologie, 1893.

FIG. 1.

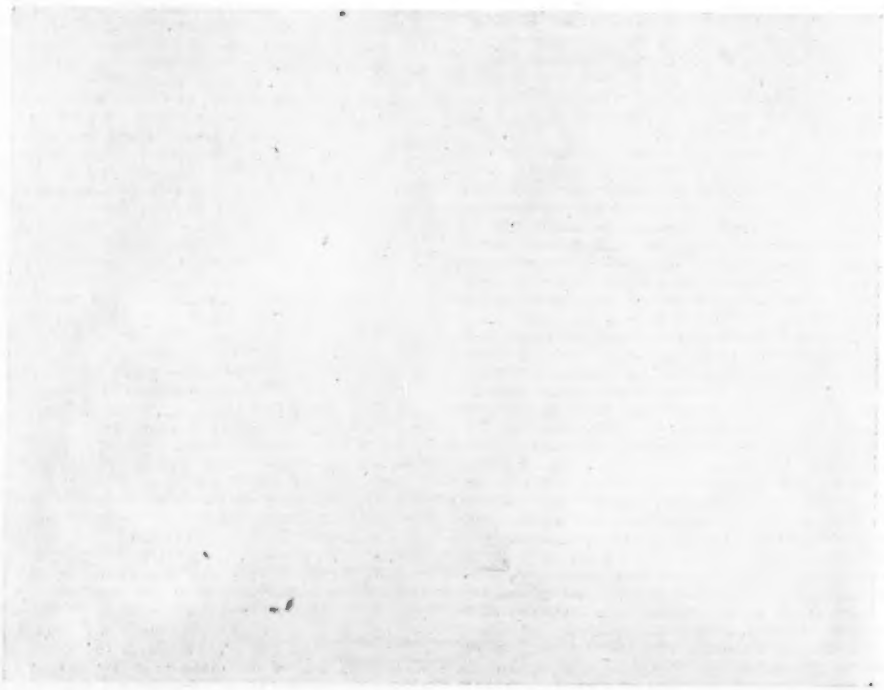


Thorax of the patient before admission to the hospital, showing the right lung to be principally affected.

FIG. 2.



Thorax of the patient after discharge from hospital, showing the extension of the disease in the left lung.



steadily losing ground. On the last examination of the chest physical signs were found on auscultation at the left apex, leaving no doubt about that side being affected, a fact which the x rays had shown to be the case some weeks previously.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE OPTICAL EFFECT OF REMOVAL OF THE LENS IN MYOPIA.

BY W. ADAMS FROST, F.R.C.S. ENG.,
OPHTHALMIC SURGEON TO ST. GEORGE'S HOSPITAL, ETC.

IN deciding whether a particular case of myopia is likely to be benefited by removal of the lens the optical effect of the operation is so important a factor that it is a pity that there should be any misconception with regard to it. A great many inaccurate and misleading statements have, however, been made by writers on this subject, while many either ignore this branch of it, or treat it by means of mathematical formulæ which are rather alarming to the average reader. The only points which are of practical importance can be made clear without any abstruse calculations, especially if we are careful not to confound two different things—the effect of the operation on the actual refraction of the eye and its effect on the correcting lens required.

With regard to the refraction if we confine the term to the influence exerted by the refracting surfaces and media of the eye on rays entering it it is evident that if the lens has the same value in all cases and lies in the same position relative to the cornea—and there is no evidence that myopia has any influence on either of these conditions—then the effect on the refraction of removing the lens must be the same in all cases.

When we consider the effect of the operation on the correcting lens required for the myopia we introduce another factor, the length of the eye, or the position of the screen on which it is required to throw images of external objects. It is a well-known fact that in the complete eye every millimetre of difference in length produces about 3 D. of myopia or hypermetropia, but when we remove the crystalline lens we alter the character of the eye as an optical instrument and make it a much weaker instrument than it was before. Consequently, changes in its length produce less effect, each millimetre of length now corresponding to only 1·38 D. We may indeed compare the complete eye and the aphakic eye to the high and low powers of a microscope. With the high power (corresponding to the complete eye) a fraction of a turn of the fine adjustment will make an appreciable difference, while with the low power (corresponding to the aphakic eye) several turns would be required to produce the same effect. The length of the emmetropic eye is about 23 millimetres, but the emmetropic length of the aphakic eye is about 31 millimetres—the focal length of the cornea. Therefore abnormalities in length are calculated from different standards in the complete and in the aphakic eye, the difference being eight millimetres.

The practical effect of these facts will be rendered clear by a few examples. 1. Myopia 15 D.—The eye is therefore five millimetres too long. After removal of the lens the length would have to be eight millimetres more than the emmetropic eye. It is only five millimetres, therefore the eye is three millimetres too short and for correction it would require + 4 D. (3 × 1·38). 2. Myopia 24 D.—The eye is therefore eight millimetres too long, but after removal of its lens the length will be exactly right. 3. Myopia 30 D.—The eye is therefore 10 millimetres too long. After removal of the lens it will be two millimetres too long (10 − 8), therefore it will require for correction 2·75 D. (2 × 1·38). It will be seen that the optical effect of the operation as regards the myopia in the first example is 19 D. (the difference between −15 and +4). In the second the effect is 24 D., and in the third the effect is 28 D. (30 − 2). In other words, the greater the degree of the myopia the more it is affected by the operation.

It must be borne in mind that I have not used exact figures and consequently the results do not agree with those found in actual practice but they correspond fairly closely.

Cavendish-square.

HÆMORRHAGE DURING AN OPERATION FOR CONVERGENT STRABISMUS.

BY MARY R. WILSON, M.D. CORNELL, U.S.A.

DIVISION of a rectus muscle for the relief of strabismus is rarely associated with, or followed by, any complication. The following case in which rather alarming bleeding was observed is perhaps sufficiently uncommon to be recorded in the pages of THE LANCET. The patient was under the care of Mr. Sydney Stephenson, by whose kindness I am enabled to publish the notes.

A girl, aged 11 years, was admitted to the Ophthalmic School at Hanwell on Feb. 9th, 1899, suffering from sub-acute inflammation of the conjunctiva due to the diplo-bacilli described by Morax.[1] She also had a convergent strabismus of the left eye measuring nearly 50°. The squinting eye "fixed" fairly well and showed no limitation of outward movement, and the primary and secondary deviations were equal. At this time right vision equalled $\frac{6}{12}$ and No. 4 J. at 12 centimetres, and left vision equalled $\frac{6}{36}$ and No. 10 J. at 27 centimetres. When under atropine the eye tended to become straight, yet, curiously enough, correction spectacles (right eye + 6 D. sph.; left eye + 7 D. sph.) did not influence the size of the strabismus in the least. Corrected vision equalled $\frac{6}{6}$ for each eye. No diplopia could be detected and the fundi were normal. On April 3rd it was decided to operate for the strabismus. The child, it was thought, would bear the operation well if the eye were put under the influence of a solution of hydrochlorate of cocaine (2 per cent.). She proved, however, so exceedingly refractory that division of the internal rectus of the squinting eye was accomplished with difficulty. The moment the operation appeared to be completed, a jet of what seemed to be arterial blood issued from the conjunctival wound, and in the course of a few seconds the eyeball became thrust forward and the lids so greatly thickened by the effusion of blood in their tissues that removal of the speculum was a difficult matter. A pad and roller bandage were firmly applied and the child was put to bed immediately. Two and a half hours later the eye was examined, when the lids were found to be much distended, the upper one being purplish and the lower one of a light-greenish colour. There had been some pain which, it was said, had disappeared. The temperature was normal. On April 4th the lids were swollen so much that they could not be opened, while the swelling had extended to the side of the face. The lids were greatly discoloured, the upper one especially, but there was no pain. The temperature rose to 99° F., the highest point reached during the continuance of the trouble. The eye was kept firmly bandaged. Two days later (April 6th) the temperature was again normal and there was no pain. The discolouration and swelling of the lids persisted but the latter were slightly opened with little difficulty. The cornea was bright and the child counted fingers. The eyeball was still proptosed, but not markedly, while the swelling had not disappeared from the side of the face. The movements of the eye in the orbit were good. The pad and bandage were re-applied. By the 8th the left eye was better in every way but a new feature presented: ecchymosis had passed through the cellular tissue of the bridge of the nose and extended to the right eye. On the 10th the child was able to open the lids of the left eye a little and although there was much effusion of blood beneath the ocular conjunctiva there was neither pain nor uneasiness. On the 13th the child could open the lids of the left eye. Much ecchymosis existed but the lids could be everted. Ecchymosis was present also on the right side of the nose and the lower lid of the right eye. A fortnight later, on the 26th, a faint discolouration of the skin of the lids, side of the nose, and left cheek still persisted. There was also a bright red ecchymosis in the ocular conjunctiva on the outer side of the globe near the corneal margin and the discolouration had not disappeared from the lower lid.

[1] Annales de l'Institut Pasteur, 1896.

The magnitude of the strabismus was much the same as before the operation. Correcting glasses were substituted for the bandage. A month afterwards, on May 29th, there was still a trace of hæmorrhage outside the cornea in the ocular conjunctiva and the lower lid was somewhat discoloured. On June 2nd ether was administered and Mr. Stephenson, after dividing the left internal rectus, shortened and advanced the external rectus. Pads and a roller bandage were applied to both eyes and the patient was again put to bed. On June 6th, the position of the eye being excellent, the bandage was discarded, the patient was put upon atropine (two grains to the ounce twice a day), and given a double shade with spectacles for constant wear. The sutures were removed on June 13th and the child was discharged from the Ophthalmic School shortly after with eyes perfectly straight.

Dorset-square, N.W.

A CASE OF CEREBRO-SPINAL MENINGITIS WITHOUT FEVER OR RETRACTION OF NECK.

BY DAVID A. BELILIOS, M.R.C.S. ENG., L.R.C.P. LOND.

IN a paper on Cerebro-Spinal Meningitis published in THE LANCET of June 24th Dr. Osler mentioned a case where a diagnosis of that disease had been made but where there had been no fever or rigidity of the muscles of the neck. The fact that no cases had previously been recorded without these two symptoms (which are almost supposed to be pathognomonic of the disease) being present induces me to publish a somewhat similar case which, however, showed other signs more suggestive of cerebro-spinal meningitis.

The patient, a married woman, 25 years of age, was suddenly taken ill whilst performing some of her usual duties. She complained of severe pains in the head and soon afterwards she vomited. Her health previously had been good. When I first saw the patient, about three-quarters of an hour after the seizure, she was delirious and somewhat cyanosed. The pulse-rate was 80 and the respirations were 17. The heart was normal and the lungs were clear. She answered no questions and did not seem to take notice of anything. Tapping the back of the head seemed to cause her some pain. There was no tenderness of the abdomen. The spleen could not be felt below the costal margin. The temperature was normal, the head was not drawn back, and no paralysis could be made out. She continued in this state till the third day, the mental condition during this time being marked by stages of unconsciousness and delusions. The pupils, which up to that time had been normal and had reacted to light, became irregular and dilated, and they did not contract on stimulation. The retinal vessels were full and there was some blurring of the discs. There was slight internal strabismus. About this time also tonic spasm of both arms came on although the muscles of the neck were normal. The bowels were constipated and she passed her urine beneath her. About the fourth week from the onset a papular rash developed on the face and thorax. The pulse varied, sometimes being full and regular and at other times irregular and small, and occasionally the rate dropped to 60. The temperature was often subnormal. The patient continued in this condition for 13 weeks, her mental state being unchanged. She then showed signs of improvement, the mind gradually cleared, and she is now convalescent.

Kingswood, Bristol.

BRITISH HOSPITAL, BUENOS AYRES.—The annual report of the British Hospital, Buenos Ayres, shows that during 1898 there were 1286 admissions of patients, 75 deaths, and 3573 attendances of out-patients. The principal causes of death were—tuberculosis (17 cases), enteric fever (10 cases), heart disease (seven cases), and pneumonia (six cases). A large number of surgical operations were performed, 468 (with 420 successful results and seven deaths) being tabulated as general surgical operations, and 162 (with 151 successful results and eight deaths) as abdominal operations. No reference is made to the medical staff beyond the statement that the committee have made an arrangement "by which a continuance of Dr. O'Conor's most valuable services is secured to the hospital." A paper by Dr. O'Conor was published in the "Mirror" of THE LANCET of July 8th.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas eb morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib iv. Proœmium.

RUGELEY DISTRICT HOSPITAL.

A CASE OF SEVERE MULTIPLE INJURIES; LAPAROTOMY; DEATH IN THREE MONTHS.

(Under the care of Dr. W. L. HUBBARD.)

THE cyst containing bile-stained fluid which is described in the accompanying case was in all probability a localised portion of the peritoneal cavity containing bile from a slightly torn bile duct. It is a remarkable fact that in certain cases effusion of bile may occur and give rise to nothing more than a very slight inflammation of the peritoneum. It is probable that in all the cases in which no severe inflammation follows the effusion the pouring out of the bile is due to an injury; but when through over-distension a gall bladder gives way the peritonitis which results is generally severe and probably fatal. The difference between these two results is to be explained by the presence or absence of micro-organisms. Healthy bile is absolutely sterile, but when it is retained bile is sure to contain microbes.

A married woman, aged 34 years, who had borne 12 children, was taken to the Rugeley District Hospital on Feb. 8th, 1899, having some hours before been knocked down by a cart, the wheels of which had passed over her left lower extremity, abdomen, thorax, and skull. She had lain out in the rain for some considerable time and her clothing was completely soaked. On admission the patient was in a state of extreme collapse; she was pulseless, the face was cyanosed, the extremities were cold, and the temperature was subnormal, but she was conscious. Examination showed signs of fracture through the anterior fossa of the skull, subconjunctival hæmorrhage and bleeding from the mouth and nose existing. A rib on the right side was fractured and the lower extremities were extensively contused but there was no fracture. The patient was four and a half months pregnant. By the application of restoratives she rallied considerably and during the first night aborted. Two days later traumatic pneumonia developed on the right side, but the more acute symptoms subsided in 10 days. On the 17th it was noted that the abdomen was somewhat distended and the urine, which up to that date had been normal both in quantity and chemically, became very scanty. The patient's skin was also slightly jaundiced. On the 24th she complained of acute pain in the region of the gall-bladder and the abdomen continued to enlarge especially on the left side. By March 5th a distinct tumour was evident which was somewhat circular in shape and dull on percussion, the percussion note not being affected by position. Dyspnœa was so marked and the respirations were so shallow that it was deemed advisable to draw off the fluid and 13 pints of a light brownish alkaline liquid which became cloudy and green on exposure were evacuated by means of a fine trocar and cannula. The nitric acid test showed that bile was present in this fluid. The tapping gave marked relief, but the fluid again accumulated and on the 17th 12 pints more of a fluid similar in character were drawn off. The stools throughout were normal in appearance and were never pale or clay-coloured. The temperature from the time of the accident varied between 97·5° and 101·5° F. On the 20th Mr. Chavasse kindly came over from Birmingham and saw the patient. At the consultation it was agreed that an abdominal section should be at once performed. This was accordingly done under chloroform, the abdomen being opened by a four-inch incision at the edge of the left rectus muscle. Several pints of fluid escaped and a large cavity, which was, as far as could be ascertained, quite distinct from the peritoneal cavity and which occupied the left hypochondriac and umbilical regions, was disclosed; this was carefully sponged

out and a glass drainage-tube was inserted, iodoform gauze packing being also employed. It was thought at the time by the operator that possibly this cystic formation was due to rupture of the duct of the pancreas as a result of the accident. Subsequent examination of some of the fluid by Dr. McDonald, pathologist to the Birmingham General Hospital, showed that bile and blood cells were present together with traces of a ferment, probably trypsin. The discharge through the wound was free and on April 1st a rubber tube was substituted for the glass one. The opening gradually closed but had not quite healed at the time of death. The patient rallied considerably for a fortnight after the operation but from that date she gradually lost strength and died on May 17th.

Necropsy.—At the post-mortem examination the head was not examined. The heart was normal as was also the left lung. It was found that the lower lobe of the right lung, as the result of the pneumonia, was completely disintegrated, caseating, and in places purulent. On examining the abdomen an unhealed sinus was seen to lead directly into the peritoneal cavity on the left side. The peritoneum itself was somewhat thickened, but there was no sign of peritonitis and no remains of any cystic formation could be detected. The liver was removed with some difficulty and was torn in places owing to the left lobe being adherent to the under surface of the diaphragm. No trace of any large rupture of its substance could be made out. The gall-bladder was small and closely adherent to the lobe of the liver, but no rupture or point of leakage could be detected. A careful examination of the pancreas and its duct failed to disclose any injury. The stomach, spleen, kidneys, and bladder were normal as far as the naked-eye appearances went.

Remarks by Dr. HUBBARD.—What was the cause of the formation of the cyst in the abdominal cavity? I can only conclude that at the time of the accident the gall-bladder was severely bruised, that it did not give way till Feb. 24th, about 16 days after the accident, when the patient suddenly felt pain in this region accompanied by faintness and exhaustion. The presence of bile in the motions shows that it was only a partial leakage which gradually distended the connective tissue in the neighbourhood or became surrounded by adhesions and eventually formed the pseudo-cyst. The length of time elapsing between the accident and the supposed rupture was ample for the formation of adhesions. Drainage caused gradual obliteration of the pseudo-cyst, so that after death, about two months after the operation, no remains of it were found. The survival of the woman for three and a half months after such extensive injuries was remarkable.

TEIGNMOUTH HOSPITAL.

A CASE OF HYDROCELE OF THE SAC OF A FEMORAL HERNIA.

(Under the care of Dr. F. C. H. PIGGOTT.)

IT is difficult to speak confidently as to the exact nature of the condition discovered at the operation in the case described below. It is highly probable that Mr. Bradburne's explanation is correct, but it must not be forgotten that the hernia which was reduced some months previously may have been the same cyst somewhat less enlarged, and that when it seemed to be "reduced" it was merely pushed into the femoral canal. The case is at any rate of great interest. For the notes we are indebted to Mr. A. A. Bradburne, house surgeon.

A single woman, aged 43 years, was admitted into the Teignmouth Hospital with a small swelling in the right groin situated in the position occupied by a femoral hernia; it was of about the size of a small marble and was tense, not painful, and quite irreducible; it slipped from between one's fingers if pressed. There was no impulse on coughing. It had caused the patient a good deal of pain at times which was felt in and about the knee-joint. There had been no abdominal pain or sickness. Rest in bed always reduced the size of the swelling and it grew large and painful when she walked much and also when she was engaged in the discharge of her household duties. Five months previously she had consulted Dr. Piggott who successfully reduced a small hernia and advised her to continue the truss which she had been wearing up to that time for two years; this she had continued to do up to a fortnight before admission, when she had had to give it up as it caused her too much pain to wear it. At the operation the sac was carefully exposed and was seen to be highly translucent and on opening it three or four drachms of a pale straw-coloured fluid were evacuated. No opening could be made out, even by a fine probe, leading into the abdominal cavity. The sac after double ligation was cut off and the wound was closed and dressed with gauze and collodion. The patient made an uninterrupted recovery.

Remarks by Mr. BRADBURNE.—In looking through the volumes of THE LANCET for the last 20 years I have been unable to find a report of a single case of a similar nature to the one recorded above. Mr. W. H. Battle[1] has reported one case and Mr. W. Anderson[2] two cases which resemble it in some respects and Mr. Samuel Osborn has reported one of Hydrocele of the Femoral Canal,[3] and this latter case resembles it very closely indeed; in fact, had not Dr. Piggott had the opportunity of reducing the hernia itself five months before it might have been considered as a hydrocele of the canal. Mr. Osborn says in his report, "My reasons for so thinking [that it was a hydrocele of the femoral canal and not of the sac] are that after the withdrawal of the fluid no impulse was obtainable on the patient's coughing nor was there on manipulation any sensation of there being a rupture in the femoral canal." It is to be noticed that Mr. Osborn cured his case by tapping and did not cut down and excise it as was done in this one. Mr. Battle says: "What is known as hydrocele of the hernial sac—a condition so rare that Mr. Langton in his remarks on a case stated that he had only found a record of the one case which he was describing out of almost 7000 cases of femoral hernia recorded by the Truss Society during a period of 18 years. The fluid in these sacs was probably much of it the result of recent irritation." Mr. Battle's patient had worn a truss for some time previously, and one had also been worn by the patient under the care of Dr. Piggott both before and after the hernia had been reduced, and it had to be discontinued because of the pain it caused her and the increase of size in the swelling. Erichsen[4] says that he was acquainted with only one case, that Curling reports one, and that "two are related by Pott, two by Pelletan, one by Boyer, and one by Lawerence." Erichsen's further remarks are worth repeating: "This disease must not be confounded with the accumulation of fluid in whatever quantity in strangulated herniæ or in hernial sacs that communicate with the peritoneal cavity. Its distinguishing feature is the accumulation of fluid in a part of the sac that has been cut off from all communication with the cavity of the peritoneum." To impress one with the dangers which may attend the treatment of a mistaken diagnosis in such cases I think that the case reported by Mr. Bryant as occurring in Guy's Hospital is worth studying.[5]

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

The Fœtal Pelvis.—Persistent Mento-posterior Position of the Face.—Eclampsia.

A MEETING of this society was held on July 5th, Mr. ALBAN DORAN, President, being in the chair.

Professor ARTHUR THOMSON (Oxford) gave a demonstration of the Sexual Differences of the Fœtal Pelvis. By means of a large number of drawings and lantern slides he supported his opinion that during fœtal life the essentially sexual characters are as well defined as they are in adult forms and that any differences which occur during growth between the adult and fœtal forms, due it may be to the influence of pressure or of muscular traction, affect both sexes alike and that such influences are in no way accountable for the characteristic features of the pelvis of the female

[1] A Case of Partial Enterocele (Irreducible) Associated with Double Hernial Sac, Operation, THE LANCET, Feb. 26th, 1887, p. 413.
[2] Two Cases of Hydrocele of Hernial Sac at St. Thomas's Hospital, THE LANCET, Jan. 16th, 1886, p. 161.
[3] THE LANCET, April 5th, 1879, p. 473.
[4] Science and Art of Surgery, vol. ii., p. 823.
[5] Hydrocele of Hernial Sac simulating the Ordinary Hydrocele of the Testicle; Frequent Tapping; Incarcerated Hernia; Operation; Peritonitis; Death. Medical Times, vol. i., 1878, p. 617.

as contrasted with that of the male.[1]—The PRESIDENT considered that Professor Thomson's researches were of the highest value. As sexual differences occurred in the genito-urinary tract long before birth it was not surprising that corresponding changes in the pelvis were also established during fœtal life. According to Bouchacourt and Brindeau the pelvic brim in the newly-born infant was almost circular; their method of investigation (by radiography) seemed, however, to involve sources of fallacy.—Dr. GALABIN would like to ask Professor Thomson if he had extended his observations to the infantile and child's pelvis and what its relation was to the fœtal and adult pelvis. Professor Thomson had shown that the transverse diameter of the sacrum was less in proportion in the adult than in the fœtus, but the development of the wings was certainly greater. Did this development occur especially near the time of puberty, as generally supposed, or uniformly throughout growth? Professor Thomson had referred to Dr. Matthews Duncan's views as erroneous, but had not entered into any detail. He (Dr. Galabin) did not see anything in Professor Thomson's demonstration to contradict Dr. Matthews Duncan's views as to the mode of action of mechanical forces on the pelvis and the changes which they tended to produce from infancy to adult life.—Mr. STANLEY BOYD said that until recently it was believed that with the establishment of the function of the ovaries the peculiarities of the female pelvis developed and it was supposed that the pelvic changes resulted in some way from the ovarian changes. Now, Professor Thomson had shown us that we were endeavouring to account for a change which did not occur. Yet the differences between the male and female pelvis, however early they may appear, remain as striking as ever. Was the female type of pelvis secondary to the development of an ovary, or is the form of the female pelvis a primary peculiarity—like the ovary itself—due to the cause which determines sex? What effect upon the form of the pelvis has non-development of the ovaries? and has early removal of the ovaries any effect upon the pelvic ring?

Dr. LEWERS read a paper on a case of Persistent Mento-posterior Position of the Face in which the child was delivered alive by the axis-traction forceps. In the case recorded the patient was a primipara and the face presented with the chin directed backwards and to the right. The os had been fully dilated and the membranes ruptured for some time, but progress was completely arrested with the face well down in the pelvis. The ordinary forceps was applied but it slipped as soon as traction was made. On traction being made with the axis-traction forceps the head came lower and the chin rotated forwards, the chin being delivered in a very few minutes. The perineum was slightly torn and the child suffered for some weeks from facial paralysis which ultimately disappeared completely. Dr. Lewers mentioned another case similar in essential points to the above which was published in the *Clinical Journal* for 1892–1893. He alluded to the liability of the ordinary forceps to slip in these cases. With the axis-traction forceps the position of the blades can be maintained by fixing the screw and the position of the child is then little likely to be affected by the subsequent tractions which, by drawing the head lower, favoured rotation forwards of the chin.—Surgeon-General HARVEY criticised the use of the word "persistent," seeing that in the cases described the chin did actually rotate forwards when the axis-traction forceps was applied.—Dr. HERBERT SPENCER agreed with the last speaker's criticism. He had met with three cases similar to those described by Dr. Lewers in which, with the chin posterior and to one side, the os dilated, the chin low in the pelvis and progress arrested for some hours, he had easily delivered by converting the face into a vertex by means of Luke Robinson's lever, a highly ingenious instrument which he had exhibited to the Society. It had the advantage of converting a difficult face (mento-posterior) into an easy vertex (occipito-anterior). He did not think the use of axis-traction forceps scientific in these cases; it was a dangerous instrument when rotation occurred, constituting then a sort of jointed lever very apt to injure the mother. The firm grip of the head could equally well be obtained with the ordinary forceps by tying the handles. He thought, however, that in cases where delivery could not be brought about by the lever long straight forceps applied to the sides of the child's head would be preferable to the other forms.—Dr. LEWERS, in reply, said that by the term "persistent" he meant that the chin had remained so long behind that the question of delivering the patient had become urgent. He thought that Dr. Spencer was discussing cases in an altogether different category. Rotation forwards of the chin was not the rule till a later stage of the labour when the chin was near the floor of the pelvis and the face deeply engaged. To interfere at an earlier stage was in his opinion unnecessary.—Dr. SPENCER remarked that Dr. Lewers had misunderstood him if he supposed that he had interfered at an early stage; he had never done so and he strongly deprecated such interference. Out of about 30 cases of face presentation he only met with the three cases mentioned above and they were, like Dr. Lewers's cases, in an advanced stage of labour with the os dilated and progress arrested for some hours. It was to be remembered that in these cases although the face was low the greater part of the head remained above the brim; by pushing up the face and drawing down the occiput the conversion was easily effected.

Dr. HORACE SAVORY (Bedford) read some notes on a case of Puerperal Eclampsia. The points of interest in his case were that it was a second attack and non-fatal though severe, that it was accompanied by hæmoglobuminuria and very obstinate constipation, that loss of consciousness lasted nine days but was suddenly regained after mechanical means had been adopted to relieve the bowels of a quantity of very dark evil-smelling fæcal matter. Dr. Savory had collected notes of 64 published cases and he quoted some to show that copræmia frequently accompanied eclamptic seizures. He also mentioned several recoveries where purgation had been the only form of treatment adopted. Not only were the bowels of his patient loaded, but the liquor amnii was full of meconium and was of the consistence of thick jelly. He suggested that these two conditions might be factors in the production or accumulation of the eclamptic toxin. The hæmoglobinuria, he thought, was comparable to that which sometimes occurs after excessive muscular exertion and he quoted the case of a lad under his care who passed two pints of hæmoglobinuric urine after a run of 10 miles. He thought that the excessive muscular effort of the uterus might account for the breaking down of corpuscles and the appearance of hæmoglobin in the urine. His patient had no signs of renal disease or urinary obstruction.—The PRESIDENT considered that the fæcal accumulation theory deserved more clinical investigation. Fæcal accumulation, however, occurred frequently in cases of abdominal tumour, but in his experience it never caused anything like eclampsia.

The following specimens were exhibited:

Dr. LEWERS: Three cases of Abdominal Panhysterectomy for Fibroids.

Dr. LEDIARD: Fœtal Bones passed per rectum in a case of Secondary Abdominal Pregnancy.

[1] For a full account of Professor Thomson's observations see the Journal of Anatomy and Physiology, vol. xxxiv., p. 359.

OPHTHALMOLOGICAL SOCIETY.

Changes in the Conjunctiva produced by Chronic Inflammation.—Plastic Operation for Contracted Socket.—A Case of Penetrating Wound of the Orbit followed by Meningitis; Trephining; Recovery.—Card Specimens.—Election of Officers.

A MEETING of this society was held on July 7th, Mr. H. R. SWANZY, President, being in the chair.

Major H. HERBERT, I.M.S., read a paper on Changes in the Conjunctiva produced by Chronic Inflammation. He said that (1) in the conjunctiva might be traced the development of normal adenoid tissue from ordinary connective tissue. The cells became more numerous and many connective tissue cells were changed into large plasma cells diffusely scattered and into small round cells mostly grouped into follicles and lymph-heaps. These small round cells or lymphocytes were young plasma cells and always had among them larger plasma cells undergoing mitosis. 2. In follicular conjunctivitis and trachoma the new follicular formations might differ from normal in being deficient in supporting stroma and blood-vessels. The first stage of deficiency was seen in columns of young cells lying free in lymph spaces; a more advanced stage was found in much larger collections lying in lymph vessels encapsuled by the vessel walls. 3. In the retrogression of follicles the cells were (*a*) carried away

in the lymphatics, or (*b*) became amœboid and travelled to the surface or passed directly into small blood-vessels, or (*c*) underwent colliquative and hyaline degeneration. 4. Scar tissue might be formed in every chronic simple conjunctivitis. 5. Large palpebral papillæ like those of spring catarrh might develop from trachoma follicles (cases were quoted and tissues shown). 6. Conjunctival cysts in great number in the upper tarsal membrane might arise from distension of tubular epithelial downgrowths the result of chronic, generally trachomatous, conjunctivitis. 7. Stellwag's brawny trachoma appeared to be due to a basophile degeneration of connective tissue fibres.—Mr. SYDNEY STEPHENSON, after remarking on the value of the new methods of staining, said that he had been interested to note that in trachoma the changes began in the lymphatic spaces and follicles. This explained the enlargement of the pre-auricular and cervical glands and occasionally of other glands seen in this disease. He also remarked on the unimportance of goblet cells and of mesh cells found in the conjunctiva. He asked if Major Herbert had been able to find any difference between follicular and granular conjunctivitis in his specimens.—In reply, Major HERBERT said that he had been unable to detect any difference.

Mr. F. RICHARDSON CROSS described a Plastic Operation for Contracted Socket. Last year he had described before the society an operation for contracted socket which consisted in a free division of the conjunctiva at the bottom of the socket and also of the tissues deeper in the orbit, and the insertion of a flap of skin from the temporal region turned on its pedicle and placed at the deepest part of the socket. The case in which he had performed the operation was still a success, and the skin had become much like conjunctiva. He had recently modified the operation by taking a finger-shaped flap from the upper lid and inserting in the deepest part of the socket; he had obtained more effect by this operation; the skin of the lid took on a conjunctival character sooner than the skin from the temple. In answer to the President he said that no ectropion resulted.

Dr. ROCKLIFFE and Mr. HAINWORTH reported a case of Penetrating Wound of the Orbit followed by Meningitis; Trephining; Recovery. The patient was struck in the left eye in a drunken brawl by a foreign seaman, evidently with a pipe in his hand, whereby a portion of the stem three and a half inches long mounted with a copper band was driven deeply into the orbit; a considerable amount of force was required to dislodge it from its firm position, and when removed the stem was plugged with some doubtful matter. The wound being thoroughly cleansed by perchloride of mercury and dressed with carbolic all went well until the seventh day, when, preceded by frontal headache, the pulse dropped to 48 and the temperature became subnormal, followed on the eighth day by a rigor and a rise of temperature to 102·2° F. A localised abscess being suspected the left temporal region was trephined; no pus was found, but a considerable amount of fluid was withdrawn by a trocar from the lateral ventricles. With the exception of further rigors accompanied by subnormal pulse the patient made a complete recovery in one month during which he had right partial facial paralysis, left external strabismus, and partial aphasia, due, as Mr. Hainworth surmised, to irritation of the sixth nerve and damage to Broca's convolution by the trephine, the rigors being explained possibly by some irritation set up around the seat of the operation. Cases were quoted showing the usual frequent mortality in such injuries.

The following cases and card specimens were shown:—

Mr. LINDSAY JOHNSON: A Macula Chromoscope.

Mr. J. D. AMENABAR: A Suction Apparatus for Soft Cataract.

Mr. H. JULER: Sclerosing Keratitis.

Mr. C. D. MARSHALL: Two specimens showing Grains of Gunpowder in the Eyeball.

Mr. JOHN GRIFFITH: 1. An unusual form of Retinitis. 2. A microscopical specimen of a Perithelial Sarcoma of the Choroid.

Mr. H. GRIMSDALE: Nævus of the Iris.

Mr. W. T. HOLMES SPICER: Œdema of the Lids.

Mr. F. RICHARDSON CROSS: A Dressing Basket for Eye Work.

Dr. E. C. FISCHER: A case of Detached Retina cured by Rest.

Mr. DOYNE: Opacity of Cornea.

Mr. ARNOLD LAWSON: A case of Spring Catarrh.

Mr. DONALD GUNN: Tuberculous Ulcer of the Lid.

The annual general meeting was held subsequently for the adoption of the report. The following officers were elected for the ensuing year:—President: Mr. G. Anderson Critchett. Vice-presidents: Mr. E. Nettleship, Mr. Henry Eales (Birmingham), Dr. W. A. Brailey, Mr. Priestley Smith (Birmingham), Mr. F. Richardson Cross (Clifton), Mr. George Cowell, Mr. H. R. Swanzy, Dr. P. H. Mules (Wrexham), Mr. Henry Juler, and Dr. S. J. Sharkey. Treasurer: Dr. John Abercrombie. Secretaries: Dr. James Taylor and Mr. E. Treacher Collins. Librarian: Mr. W. Adams Frost. Other Members of Council: Mr. Charles J. Oldham (Brighton), Dr. Howard H. Tooth, Dr. W. A. Turner, Mr. G. E. Wherry (Cambridge), Dr. S. H. Habershon, Mr. J. B. Lawford, Mr. W. J. Cant (Lincoln), Mr. Sydney Stephenson, Dr. George Mackay (Edinburgh), Dr. Patrick Maxwell (Dublin), Mr. Charles Shears (Liverpool), and Mr. W. T. Holmes Spicer.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Cerebellar Tumour.—Development of the Testicle.

THE tenth ordinary meeting of this society was held on July 5th, Sir JOHN BATTY TUKE, President, being in the chair.

Mr. STILES exhibited: 1. A child two months after operation for large Hydrencephalocele. The head was tapped twice, 18 ounces being drawn off on the first occasion and 20 ounces on the second, but the fluid accumulated to the same extent within 48 hours on each of these occasions. The operation consisted in making a long incision over the anterior part of the sac; the finger when introduced here went down to the frontal bone. A posterior incision of like extent was also made. The anterior sac was evidently due to a rupture of the hydrencephalocele and a narrow constricted opening showed where the rupture had taken place. Between the incisions a large piece of skin was removed and the wound was sutured. The child progressed but the wound suppurated. The occurrence of this suppuration has probably kept the child as yet free from recurrence of the hydrencephalocele. 2. A child after operation for Extensive Tuberculous Osteomyelitis of the Tibia. The case was diagnosed as one of abscess of the tibia with thickening and distension of the bone. The skiagram showed the presence of the condition. 3. A child after Excision of the Wrist for Tuberculous Disease. The wrist is now useful.

Dr. ALEXANDER BRUCE presented a patient with Typical Auditory Aphasia. The condition came on after a paralytic shock in March last which caused paralysis of the right hand and hindered the understanding of spoken speech. She had not lost the power of speech but she uttered words which were as a rule perfectly formed but which were without connexion or sense. The speech was still unintelligible and she could neither read nor write though she could count up to 21. She suffered from word blindness as well as from word deafness. She could not tell her name or place of abode nor could she name common articles.

Mr. STILES and Dr. RAINY exhibited skiagrams of: 1. Tuberculous Disease of the Ankle. The lower end of the tibia was enlarged, and a skiagram was taken in order to see if the ankle-joint was affected. The radiogram did not show that the tibia was at all affected, and yet the operation showed it to be more diseased than the joint itself. 2. Separation of the Lower Epiphysis of the Humerus due to a fall on the elbow. 3. Fracture of the Shaft of the Femur at the junction of its middle and upper third, showing typical displacement of the upper fragment. This was from a boy, aged 12 years.

Dr. ALEXANDER BRUCE showed microscopical preparations to indicate that Chronic Degeneration of the Anterior Cornua of the Cord (progressive muscular atrophy) may exist without Degeneration in the Crossed Pyramidal Tracts.

Mr. HARVEY LITTLEJOHN showed specimens of: 1. Strangulation of the Intestines by the Omentum. This happened to a man who died suddenly after two days' illness, vomiting, &c., though he was going about all the time. The post-mortem examination showed that two feet of the small intestine had gone through the omentum. 2. Intussusception of the Ileum. This occurred in a woman, aged 35 years, who after partaking of sardines for supper became seriously ill due to supposed poisoning. She died in two days from the results of the intussusception. 3. Specimens from two cases

of Hydrochloric Acid Poisoning. In one case the man died in one and a quarter hours after swallowing two ounces of the acid. The stomach as well as about six feet of the small intestine showed marked corrosion. The second specimen was from a man who had suffered from vomiting and purging with severe colic. He had swallowed about half a wineglassful of soldering fluid—a solution of chloride of zinc. He lived for some time afterwards.

Dr. ALEXANDER BRUCE read a paper on a case of Cerebellar Tumour considered from the point of view of localisation and of treatment. Since making a former communication to the society in January he said he had been looking for a case which would illustrate the principles which he then laid down. In April he came across such a case. The patient was a married man, aged 34 years, an abstainer, and having no history of venereal disease. His troubles began five years ago with definite and absolute deafness in the left ear. This condition had remained since. Four years ago he found that he could not walk in the dark or ride on his bicycle as he always fell towards the left side. In order to move his left arm or leg he had to exert a special effort of will. He had to think out every step in the process of making a voluntary motion with the members of the left side. His gait became more and more unsteady. Seven months ago he had two or three attacks of vomiting and a further slight recurrence on May 3rd of this year. Six months ago he began to suffer from severe left occipital headache and dimness of vision. The latter had increased, especially in the right eye. He also complained of a dull pain in the small of his back. On examination of the patient his temperature was found to be subnormal, 97·4°F. The left-sided headache was over the parietal and occipital bones and the head over these regions was tender to touch. There was insensitiveness of the left conjunctiva. His muscular sense was normal on the right side, but not on the left. The anterior two-thirds of the tongue showed impaired sensation of taste. There was evidence of optic neuritis, chiefly marked on the right side. Slight nystagmus was present in all positions of the eyeball, but this was increased on making extreme lateral movements. In the right eye the nystagmus was rapid and slight; in the left it was slower but more marked. The visual field was contracted in both eyes. There was a degree of paresis on the left side of the face and the tongue had greater difficulty in moving towards the left side. The grasp of both hands was equal. In the right hand a fine vibratile tremor was present, but this was much coarser in the left hand. In walking the left foot was lifted and stamped down and the patient tended to fall towards the left side every six paces or so. No Romberg symptom was present. The knee-jerks were equal and not exaggerated. The diagnosis was a tumour in the posterior fossa of the skull if not in the cerebellum itself. Dr. Bruce gave the following explanation of the symptoms. The afferent fibres from the lateral and posterior columns, whether they go by the direct cerebellar tract or by the tract of Gowers, all go to the central lobe of the cerebellum—all the afferent fibres end there. This middle lobe is in connexion with two nuclei in the floor of the fourth ventricle. The path of conduction is from the cortex to the roof nuclei, then from the roof nuclei to the nucleus of Deiters, and from there to the semi-circular canals. From Deiters's nucleus there are also fibres going to the sixth nerve and two distinct bundles are sent down the cord to cells in the anterior cornu of the same side as well as to that of the opposite side. Deiters's nucleus evidently supplements the energy of the cortical cells. It saves the motor cortex from having to do with the details of balancing, &c. In the case described, where Deiters's nucleus was involved, the patient had to think out the processes of motion on the left side. This probably also explains the nystagmus and the difference in each eye. The incoördination of movement was probably due to an interruption of connexion between the cord and Deiters's nucleus. The cerebellar control was cut out in the case of this patient. All the symptoms pointed to the presence of the tumour on the left side. The question at issue was, Was it inside or outside the cerebellum? The balance of opinion tended to show that it might be a fibro-cellular or sarcomatous growth attached by a small pedicle to the petrous bone, or that it was growing from the flocculus. In this case the latter was the condition found. The tumour had pressed the side of the medulla and pons inwards and had caused a small hæmorrhage which had cut across the tracts of the restiform body and had pressed on the nucleus of Deiters. Thinking that it might be growing from the bone an operation was performed by Mr. Cotterill, but the patient died suddenly three days later. The whole case afforded very close confirmation of what was expected.—Mr. COTTERILL explained the steps of the operation. He said that such operations on the cerebellum were not at present within the range of recognised surgical procedure. As the patient was, however, rapidly sinking, and as the tumour might have been pedunculated, an attempt was made to remove the growth. The whole of the lower part of the occipital bone was removed as far as the posterior third of the foramen magnum. The bone removed might be as large as the palm of one's hand. The bleeding was terrific from the divided emissary veins. The blood escaped in large jets and the great loss of blood may have contributed to the death of the patient. The bleeding may have been due to obstruction to the venous flow by the tumour. The cerebellum was widely exposed, but as the tumour was situated in the cerebellum itself it could not be removed.

Dr. FOULIS gave a communication on Some Observations on the Development of the Testicle. The present investigation was made in order to find out the origin of the epithelium in the seminal tubules. Dr. Foulis described a minute opening which he had found leading through the tunica albuginea from the testicle to the Wolffian body in the bodies of fœtal deer. This aperture has not previously been described. He then proceeded to describe the nature of the structures which pass through this aperture into the testicle. Serial sections were made through the testis and the Wolffian body and a solid cellular body was seen passing through the aperture. As soon as this solid body gets through the capsule of the testes it gives off branches of cells in all directions. These cellular projections distend the capsule of the testicle until the stalk-like body is entirely concealed. When examined by higher powers the slides show that the contents of the stalk consist of transverse sections of minute tubules. In like manner all the offshoots which this body gives off in the testicle are made up of minute tubes. Each has a basement membrane on which is a single layer of columnar epithelial cells and each tubercle is surrounded on all sides by fibrous tissue. The tubular structure of the testicle therefore arises from cellular outgrowths from this stalk which is in direct communication with the Wolffian body only through this minute aperture. Numerous beautiful preparations were exhibited to illustrate the paper.

Reviews and Notices of Books.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. lvii. Tom—Tytler. Pp. 461. Vol. lviii. Ubaldini—Wakefield. Pp. 463. London: Smith, Elder, and Co. 1899. Price 15*s.* each.

LITERATURE is represented in these two volumes mainly by Archbishop Trench and Anthony Trollope, classical scholarship by Isaac Vossius, natural science by Cromwell Fleetwood Varley and John Tyndall, and art by J. W. M. Turner and Sir Anthony Van Dyck. Richard Chenevix Trench was born in Dublin in 1807 and was educated at Cambridge University. He became Dean of Westminster in 1856, Archbishop of Dublin in 1864, and died in London in 1886. He was the author of many works on a variety of subjects; "The Study of Words," first published in 1851, reached the nineteenth edition in 1886. Varley (*b.* 1828 *d.* 1883) was in the service of the Electric and International Telegraph Company from 1846 to 1868. He introduced several important improvements in practical telegraphy and on the failure of the first Atlantic cable, laid in 1858, he did much to restore public confidence in the enterprise and to bring about its renewal. In 1870 he patented an instrument which he called a cymaphen and by means of which a year before the date of the patent of the Bell telephone music was transmitted from Westminster Bridge-road to Long Acre over an ordinary telegraph wire with complete success. Tyndall (*b.* 1820, *d.* 1893) was Professor of Natural Physiology in the Royal Institution from

1853 to 1887. In addition to much original work on the subjects of light, heat, sound, electricity, magnetism, &c., he showed about 1875 that putrescible fluids after boiling did not undergo putrefaction in presence of "optically pure" air—i.e., air which had been rendered moteless by subsidence so that the passage of an electric beam through it was invisible on account of the absence of solid particles in suspension, whereas on exposure to ordinary dust-laden air, through which the path of an electric beam was distinctly visible, the same solutions soon swarmed with bacteria.

The biographies of medical men in the two volumes are 48 in number, of whom six were presidents of their corporations, but of the 48 only five were born during the present century and of the remainder several became famous for attainments in other fields than medicine. Edward Tyson was born in Somersetshire in 1650, graduated as M.D. at Cambridge University, was elected a Fellow of the Royal College of Physicians of London in 1683, and became Censor in 1694. He was appointed physician to Bridewell and Bethlehem Hospitals and lectured on anatomy to the Barber-Surgeons for some years until 1699 when he resigned. He was the first in England who published elaborate monographs on the anatomy of particular animals, such as the porpoise, rattlesnake, Virginian opossum, "orang-outang" (not a true orang-outang but a chimpanzee from Africa), &c. He died in 1708; his monument is now in All Hallows, Lombard-street. Richard Tyson, son of the preceding, was born in Gloucestershire in 1680, and graduated as M.D. at Cambridge University in 1715. He was elected a Fellow of the Royal College of Physicians of London in 1718, was five times Censor, registrar from 1723 to 1735, treasurer 1739–46, and President 1746–50. In 1725 he was elected physician to St. Bartholomew's Hospital. He died on Jan. 3rd, 1749–50. Richard Tyson, great-nephew of Edward Tyson already mentioned, was born in London in 1730 and graduated as M.D., at Oxford University in 1760. He was elected a Fellow of the Royal College of Physicians of London in 1761, was Censor several times, and registrar from 1774 to 1780. He was elected physician to St. Bartholomew's Hospital in 1762 and died in 1784. Thomas Vicary, probably a native of Kent, was in 1525 elected third warden of the Barbers' Company of London. In 1528 he was upper warden and in 1530 was elected master, to which annual office he was again elected in 1541, 1546, 1548, and 1557, a frequency of presidency to which no other member of the guild has ever attained. In 1528 he was surgeon to Henry VIII. at a salary of £20 a year; in 1536 he became sergeant-surgeon with emoluments of £26 13*s.* 4*d.* a year. The Barbers and Surgeons were united on July 25th, 1540, by an Act of Parliament (32 Henry VIII., Cap. 42) incorporating them as "The Maisters or Governours of the Mystery and Comminalte of Barbours and Surgeons of London." From 1548 to 1552 he was a governor of St. Bartholomew's Hospital and from 1554 till his death in 1561 he was resident with "oversight of all such officers as be within the hospital." Vicary continued sergeant-surgeon to Edward VI., Mary, and Elizabeth and in 1554 was appointed surgeon to Philip. An anatomical work said to have been compiled by him was reprinted by the Early English Text Society in 1888. John Painter Vincent was born in Berkshire in 1776 and in 1800 became a Member of the newly incorporated Royal College of Surgeons of England. He delivered the Hunterian Oration in 1829, was Vice-President of the College on several occasions, and President in 1832 and 1840. He was elected a Fellow of the College when that order was established in 1843. He was full surgeon to St. Bartholomew's Hospital from 1816 to 1847 and died near Sevenoaks in 1852. Benjamin Travers, son of a London tradesman, and born in 1783, was in 1800 articled to Sir Astley Cooper for a term of six years and in 1806 was admitted M.R.C.S. Eng. In 1810 he was appointed surgeon to the London Infirmary for Diseases of the Eye, now the Moorfields Ophthalmic Hospital; in 1813 he became a Fellow of the Royal Society; and in 1815 a surgeon to St. Thomas's Hospital. He was chosen President of the Hunterian Society in 1827 and in the same year he acted as President of the Royal Medical and Chirurgical Society. He filled all the important offices at the Royal College of Surgeons of England, being Hunterian Orator in 1838, Vice-President on several occasions, and President in 1847 and 1856. He was also one of the Queen's surgeons-extraordinary, afterwards becoming surgeon-in-ordinary to the Prince Consort and serjeant-surgeon. Travers was the first hospital surgeon in England to devote himself to the surgery of the eye; he did much to raise the position of this branch of surgery and published a treatise on the subject in 1820. He died in 1858. Thomas Stewart Traill was born in Orkney in 1781, graduated in medicine at Edinburgh University in 1802, practised in Liverpool from 1803 to 1832, and was then appointed to the Chair of Medical Jurisprudence in Edinburgh University. He was admitted a Fellow of the Royal College of Physicians of Edinburgh in 1833 and became its President in 1852. He was elected a Fellow of the Royal Society of Edinburgh in 1819. Traill was editor of the eighth edition of the Encyclopædia Britannica, although much of the work owing to his ill-health was done by Adam Black. He was the author of several treatises and contributed nearly 70 papers on various scientific subjects to different journals between 1805 and 1862. He died at Edinburgh in 1862. Thomas Jolliffe Tufnell, born in Wiltshire in 1819, studied medicine in Exeter and at St. George's Hospital, became qualified as M.R.C.S. Eng. in 1841, and was for about a year assistant surgeon to a British regiment serving in India. He was admitted in 1845 the first Fellow by examination of the Royal College of Surgeons in Ireland. In 1846 he was appointed surgeon to the Dublin Military Prison. In the same year he commenced to lecture on military hygiene and was Regius Professor of Military Surgery in the Royal College of Surgeons in Ireland from 1851 to 1860, when the chair was abolished by the Government as a result of the formation of the Netley Military School. He was President of the College in 1874–75 and died in 1885.

Sir George Leman Tuthill was born in Suffolk in 1772 and graduated as B.A. at Cambridge University in 1794. After several years' captivity in France as a *détenu* he returned to Cambridge, graduating as M.D. in 1816. He was elected a Fellow of the Royal Society in 1810 and a Fellow of the Royal College of Physicians of London in 1817, becoming Goulstonian Lecturer in 1818 and Censor in 1819 and 1830. He was knighted in 1820. He was physician to the Westminster and to the Bridewell and Bethlehem Hospitals. He was also an active member of the committee for the preparation of the Pharmacopœia Londinensis of 1824, and at the time of his death in 1835 he was engaged on the Pharmacopœia of 1836. Sir Charles Richard Vaughan was born at Leicester in 1774, being a brother of the physician Sir Henry Halford who changed his name from Vaughan to Halford in 1809. Charles intending to follow the medical profession studied both in Edinburgh and London and took the degree of M.B. in 1800. The greater part of the next eight years was, however, spent in foreign travel and in 1809 he entered the Diplomatic Service. After holding various posts in Spain, Paris, and Switzerland, he was Envoy-Extraordinary and Minister Plenipotentiary to the United States of America from 1825 to 1835. He was knighted in 1833 and he died in 1849. Sir John Tomes was born in Gloucestershire in 1815, studied medicine at King's College and Middlesex Hospital, and was admitted M.R.C.S. Eng. in 1839. The tooth forceps with jaws accurately adapted to the forms of the necks of the various teeth, invented by him in 1839 or 1840, were

the first exemplars of the modern type of forceps which supplanted the old "Key" instrument. In 1845 he delivered a course of lectures at the Middlesex Hospital which marked a new era in dentistry and in 1847 at the same hospital he administered ether as a general anæsthetic for the extraction of teeth as well as for operations in general surgery. In 1858 he was successful in inducing the Royal College of Surgeons of England to grant a licence in dental surgery. He was also one of the chief founders in 1856 of the Odontological Society and in 1858 of the Dental Hospital where he was the first to give systematic clinical demonstrations. After the dental lectureship had been established about 20 years Tomes, ably assisted by James Smith Turner, was instrumental in obtaining the Dentists Act of 1878. A triennial prize bearing his name is awarded by the Royal College of Surgeons of England for research in dental science. He was elected in 1883 an honorary Fellow of the College, was knighted in 1886, and died in 1895. Joseph Toynbee was born in Lincolnshire in 1815, attended St. George's and University College Hospitals, and was admitted M.R.C.S. Eng. in 1838. The biographer (Mr. D'Arcy Power) says that "aural studies powerfully attracted him even during his student life, for as early as 1836 several of his letters, under the initials 'J. T.,' appeared in THE LANCET." He was admitted a Fellow of the Royal Society in 1842, and in 1843 he was nominated one of the newly-created order of Fellows of the Royal College of Surgeons of England. Upon the establishment of St. Mary's Hospital in 1852 he was elected aural surgeon and lecturer on diseases of the ear, an appointment which he resigned in 1864. In 1860 he published his principal work, "Diseases of the Ear: their Nature, Diagnosis, and Treatment." He died in 1866 from the accidental inhalation of chloroform with which he was experimenting. Thomas Trotter was born in Roxburghshire in or about 1760, studied in medicine in Edinburgh, and was serving in the navy as a surgeon's mate in 1779. On returning to England he practised in Northumberland and published "Observations on the Scurvy" in 1786. He continued his studies in Edinburgh, graduated there as M.D. in 1788, resumed the Naval Medical Service in 1790, and in 1794 was nominated by Lord Howe, Physician to the Channel Fleet. He subsequently published a number of books, and died in Newcastle in 1832. Daniel Hack Tuke was born at York in 1827, entered as a student at St. Bartholomew's Hospital in 1850, and two years later was admitted M.R.C.S. Eng. In 1853 he graduated as M.D. at Heidelberg. Shortly afterwards he became visiting physician to the York Retreat and Lecturer on Mental Diseases at the York School of Medicine, but in 1859 symptoms of pulmonary phthisis induced him to remove to Falmouth. In 1875 he commenced practice in London as a consulting physician in mental diseases and lectured on the same subject at Charing-cross Hospital. Tuke was the author of several works connected with his specialty, the principal one being "A Manual of Psychological Medicine," produced in 1858 with Dr. (afterwards Sir) J. C. Bucknill; he was also from 1880 joint editor of the *Journal of Mental Science*. He died in 1895. Thomas Turner, born in Truro in 1793, studied medicine in Bristol and London, and was admitted M.R.C.S. Eng. and L.S.A. in 1816. The remainder of his life was passed in Manchester. In 1824 he delivered an address in which he developed the plan of establishing in Manchester a school of medicine and surgery, the school thus formed being recognised by the Royal College of Surgeons of Edinburgh in 1825 and by the medical departments of the navy and army in 1827. Turner was the moving spirit of the Pine-street School of Medicine, which after the dissolution of the Mount-street and Marston-street schools entered into an agreement with the Chetham-street school in 1859, and the Royal School of Medicine thus came into existence to be amalgamated with Owens College as its medical faculty in 1872. Turner died in 1873. Alexander Tweedie was born in Edinburgh in 1794, studied medicine at the university there, and graduated as M.D. in 1815. In 1822 he was appointed assistant physician to the London Fever Hospital and in 1824 became physician, an office which he filled for 38 years. He was a voluminous writer, continued to practise at the age of 89 years, and died at Twickenham in 1884. Frederick Tyrrell, son of the Remembrancer of the City of London, was born in 1793. He was articled to Sir Astley Cooper, attended the practice of the united Guy's and St. Thomas's Hospitals and in 1816 was admitted M.R.C.S. Eng. In 1822 he was elected a surgeon to St. Thomas's Hospital, and a few years later became lecturer on anatomy and physiology at the same hospital. He died in 1843. Tyrrell edited Sir Astley Cooper's "Lectures on the Principles and Practice of Surgery," London, 1824–27. The publication of those lectures in THE LANCET led to the suit of Tyrrell *v.* Wakley, in which Thomas Wakley, Founder of THE LANCET, was cast in damages to the amount of £50.

British Columbia for Settlers. By FRANCES MCNAB. London: Chapman and Hall, Limited. 1898. Pp. 369. Price 6*s*.

THE author has divided her subject into two heads, pages 1 to 104 consisting of some half-a-dozen chapters on special subjects and the remainder being a detailed account of her travels from Liverpool to and through British Columbia *viâ* the Canadian Pacific Railway. The first part is devoted to special articles on Mines, Trade, Agriculture, the Chinese, and the Red Indians. These are all ably written, giving an intending settler a very clear idea of what he will have to go through, of the character of the people with whom he will mix, and of the nature of the success to be expected from mining and agricultural pursuits. Interspersed are returns of the Board of Trade and anecdotes—the former chiefly remarkable as showing the stationary nature of trade during the last six years, the latter as showing the superstitious character of the Chinese and the mysticism of the Indians. Full details are given of the working of the mines from which the reader cannot fail to gather valuable knowledge. The author lays special stress on the unfitness and utter incapability of some emigrants and says that "mining is essentially a business for which a man requires special training and knowledge."

Among the coast Indians, it is interesting to note that the chief causes of death are bronchial and pulmonary affections; phthisis is the most prevalent disease. It is satisfactory to observe that vaccination has practically extirpated small-pox. The author has given us a very good idea of the wonderful changes effected by the Canadian Pacific Railway, its influence on the prices of the market, and the inability of the inhabitants to gauge the reasons. The following is an extract referring to the rush to Klondyke: "No doubt there is great wealth, although it remains to be proved whether it is really the richest goldfield. For we have yet to hear about the costs. Firstly, labour is so dear that a man must do everything himself or pay at least $6 a day. ..... The ground though gravel, is frozen as hard as a rock for 50 feet deep. For several months of the year work is only possible under great difficulties and disadvantages, such as probably exist nowhere else. Lastly, the gold-strikes, however rich, are very uncertain and the paper reports of the wealth brought down are made the most of, no comparison being offered with the numbers of blanks or the cost of original outlay." Three good maps are given and in the appendix will be found an "Extract of the Land Act of British Columbia."

and the Assessment Act of 1888 and other useful information; a better index might have been supplied.

Part II. considers in detail practically all southern British Columbia, including Vancouver Island. Advice is given as to the best and cheapest way of getting out to the country, as to the state of different parts, and as to the most suitable occupation in the different parts. It seems to be the confirmed opinion of the old-established men that the emigrants who as a class are the least successful are the "gentlemen's sons." For this the author blames their education which in her opinion is not sufficiently elastic. We cannot agree with her in her estimation of our public schools as trainers of character. Probably if a boy's character is not strengthened and moulded by public school life it never will be and the fault is to be looked for in the boys themselves and not in the schools. As a whole the book is undoubtedly well written; the style is good and it says much for the author to have made such an interesting book out of such matter-of-fact material. The impression left on the reader's mind will probably be that no one should think of going out unless he is possessed of good physique and is able to turn his hand to anything; small capital is practically a *sine quâ non* for success in farming. In conclusion, we may congratulate the author on the successful way in which she accomplished her travels, putting up with hardships and fatigue that not many women would care to undergo.

LIBRARY TABLE.

Matriculation Directory. The University Tutorial College Series. London: W. B. Clive. 1899. Price 1*s.*—This little book, issued with a special view to the forthcoming matriculation examination in January, contains good advice as to choice of text-books in each subject, methods of working, and everything necessary for a student preparing for this examination.

Syllabus of Materia Medica. By Dr. HARVEY and Dr. A. D. DAVIDSON, revised in accordance with B. P. 1898, by W. MARTINDALE, F.L.S. Tenth edition. London: H. K. Lewis. 1898. Price 1*s.*—In this edition the reviser has added two tables of metric weights and measures and their equivalents in terms of the Imperial units to encourage the more general use of the metric system for prescribing. The syllabus is divided into four heads—(*a*) inorganic kingdom, (*b*) organic kingdom, (*c*) vegetable kingdom, and (*d*) animal kingdom. A neat and simple use of asterisks, daggers, and numbers points out to the student the preparations requiring more careful study. The "get-up" is admirable.

The Pocket Pharmacopœia. By F. HUDSON COX, F.C.S., and J. STOKES, M.D. Durh. London: Baillière, Tindall and Cox. Pp. 206. 1899.—This volume, which is a condensed reproduction of the British Pharmacopœia, 1898, is evidently intended as a "cram-pharmacopœia" for the convenience of students with the addition of some very brief therapeutical notes.

The Story of Photography. The Library of Useful Stories. By A. T. STORY. London: Geo. Newnes, Limited. Pp. 181. 1898. Price 1*s.*—This manual of a well-known series treats the subject of photography from a scientific point of view, though it cannot fail to be understood by the people. It lucidly traces the successive steps in the history of photography from its very beginning, the discovery of the camera obscura, and proceeds gradually and simply to show how the art has reached its present state of perfection. A useful index is appended which is sometimes lacking in such series. We can commend this manual without reserve to lovers of photography.

South Africa as a Health Resort. By A. FULLER, M.B., C.M. Edin., M.R.C.S. Eng. London: W. B. Whittingham and Co., Limited. Sixth Edition. 1898. Price 1*s.*—Well illustrated, with a good map of Africa south of the Congo Free State, this book reviews in detail the advantages and objections to different towns as resorts for phthisical patients, at the same time dispelling some ignorant notions on the subject. Valuable information is afforded as to the facilities of travelling and the best way of getting about from one town to another.

Domestic Hygiene. By A. W. WILLIAMS, M.B., C.M. Edin., D.P.H. Lond. London: Geo. Bell and Sons. 1898. Pp. 175. Price 1*s.* 6*d.*—In spite of the large numbers of booklets and pamphlets which are flooding the market on this subject there is, perhaps, room for this little manual. There are useful chapters on the Preventable and Communicable Diseases, Tuberculosis and Parasitic Diseases. The value of exercise is discussed very fairly, showing the necessity of mental and physical development simultaneously.

Dwelling-houses. By W. H. CORFIELD, M.A., M.D. Oxon., F.R.C.P. Lond. London: H. K. Lewis. Fourth edition. 1898. Price 3*s.* 6*d.*—This book, which is made up of a series of Cantor lectures delivered before the Society of Arts, treats of the sanitary construction and arrangements of our houses in a style which is at once concise and clear. All necessary minute points are touched upon in a way which should prove the importance of considering such details. The value of the book is enhanced by an excellent table of contents and an index which will save the reader much time in referring to any particular point whether as to sewage, ventilation, water-closets, or disinfectors. The diagrams are good and numerous.

New Inventions.

AN IMPROVED CHLOROFORM MASK.

IN using the Schimmelbusch mask I found it difficult to keep the instrument in position on the face and at the same time to hold the chin up and drop the anæsthetic on the lint. I therefore had the following improvements added: 1. A folding chin plate (see diagram) attached to the frame in such a manner that it would not interfere with the lint holder catch and at the same time be rigid enough to stand considerable traction on the inferior maxilla. 2. On the spoonlike handle (see diagram), a curved finger plate by which the pull may be made; I thus had one hand entirely free to drop the anæsthetic, to note the pulse, &c. With this improvement it is easy to have the head turned to one side and still keep the chin up and the mask in position. Mr. F. Ash, Edmund-street, Birmingham, made the alterations in a very satisfactory manner.

Birmingham. J. SANDISON CRABBE, L.R.C.P. & S. Edin.

PEKING HOSPITAL.—The thirty-seventh annual report of the Peking Hospital, established in connexion with the London Missionary Society and superintended by Dr. Eliot Curwen, shows that much useful work has been done during 1898. The hospital is situated in the East City and has ward accommodation for 38 men and four women. During 1898 there were 11,835 out-patients who made 31,549 attendances, 205 men and 19 women were admitted as in-patients, and 579 visits were paid to patients in their homes. In the "Medical Notes" of the report several cases of epidemic jaundice are described. Subscriptions to the hospital may be sent to Mr. H. B. Curwen, Enfield House, Hampstead, or to the London Mission House, 14, Blomfield-street, E.C.

THE LANCET.

LONDON: SATURDAY, JULY 15, 1899.

THE Memorial to the Council from Members of the Royal College of Surgeons of England, which we printed in THE LANCET of June 24th, is a very important document. It is the latest appeal from the Members of that great corporation for the rights which have been so long withheld from them. The facts on which the Members base their claim to a share in the representation on the Council are simple and clear. Under the first Charter of the College which was granted in 1800 the Members were the sole *alumni* of the College and this arrangement continued until 1843 when a new Charter was obtained and the new order of Fellows was instituted. To the Fellows was given the right to elect the members of Council and the Members of the College were wholly excluded from all share in its government, direct or indirect, and this state of affairs has continued up to the present day. For many years the Members have been striving to obtain representation on the Council. They have petitioned, they have carried resolutions at the annual meetings, they have appealed to the Privy Council, and the result obtained in 20 years of arduous effort is to all appearance absolutely nothing. A great change, however, has gradually come over the Fellows and the Council. At one time the Fellows were strongly opposed to any representation of the Members and even two years ago the reply of the majority to a circular issued by the Council to the Fellows was in the negative, but this majority was very much less than half the body of Fellows and it has moreover been suggested that the form in which the question was put to the Fellows was such as to predispose them to vote against the innovation. There is nothing really to be feared from the opposition of the Fellows; very many Fellows are strongly in favour of some representation for the Members and but very few would be found who would offer any serious opposition. With the Council it is not very different although it contains within its boundaries some who think that any concession to the Members in this matter would be fraught with the direst consequences to the College. Yet these form a small minority; a few members of the Council feel strongly that the Members should be represented and the remainder cannot but acknowledge to themselves that there is much to be said for the Members' claims.

While the matter is in this state a special opportunity has arisen. The centenary of the College is to be celebrated in 1900 and the Council has decided to apply for a supplementary Charter to enable the College to confer diplomas of honorary Fellowship. An answer which has often been given to some appeal of the Members was that as a new Charter would be needed to confer the franchise on the Members it was not possible to do anything until a new Charter was obtained. The time has now come. The Council intends to apply for a fresh Charter, and it would not be difficult to include in the petition a request for representation for Members. Can a more fitting time be chosen? Can a more suitable centenary celebration be devised? We appeal, we earnestly appeal, to the Council to take advantage of the opportunity which is offered. The Council can now concede, and concede gracefully, what has been asked for so long. If this opportunity be lost none such can occur again, and the internecine strife will continue, adding neither to the dignity nor to the utility of the College. The house is divided against itself, and though it may not fall, yet its strength is greatly lessened. The Members are, we understand, willing to be represented on the Council by Fellows, and as there are many Fellows who are in general practice it would not be difficult to find representatives who could appreciate the needs and understand the difficulties of the Members.

If the Council of the College be well advised it will seize this opportunity of righting a great wrong and of consolidating the interests of the College. It is impossible to imagine a more temperate appeal than the Memorial of the Members; there is an utter absence of anything in the nature of a threat or accusation, nothing but an earnest request for that which they feel to be their birthright.

THE more the circumstances connected with the appointment of a Deputy Inspector-General to the charge of Haslar Hospital, the principal naval hospital establishment, are considered, the more we are puzzled to account for the very exceptional action taken by the Admiralty in the matter. There does not seem to be any room for doubt from Mr. GOSCHEN'S emphatic statement in the House of Commons that he accepted the sole and entire responsibility for having made that appointment. He asserted that he had done so because he was actuated by a determination to select the best man he could find to fill a post which he, rightly no doubt, regarded as one of the most important in the kingdom and for the efficiency of which he was responsible. As Mr. GOSCHEN fully admitted that in taking that course the rules of the service in regard to seniority and the usual procedure of the service in such cases were set aside, it may be assumed that he is prepared to justify it by showing that what was done was done deliberately after due official inquiry by those who were competent to weigh and to judge of the relative merits of the medical officers concerned. It must be remembered that the course taken was altogether exceptional; that there were three officers of the inspector-general grade of the Royal Naval Medical Service available for selection for a post which has, we believe, always hitherto been filled by men of that rank; and that these officers were passed over in favour of one of the subordinate rank of deputy-inspector. We cannot help regarding a departure of this kind as a very serious matter, and it goes without saying that it should not be taken without the fullest inquiry and consideration beforehand. It is not only calculated to arouse suspicion and discontent but to lead to a very undesirable state of feeling on the part of medical officers who should be encouraged to look to their professional chief

for recognition of their character, abilities, and professional worth. We are not, by any means, contending that circumstances may not arise rendering a departure from the usual course of procedure necessary in the *bonâ fide* interests of the public service. Accepting, however, for the sake of argument, that selection and final decision must ultimately rest with those who are entrusted with the requisite responsibility and power, we are nevertheless at a loss to understand the reasons which can be assigned in justification of the action which has been taken on this particular occasion.

We suppose it will not be doubted that those who depart from any usual and officially recognised course do not simply act arbitrarily, but are prepared to justify the position which they have taken up. What are the facts? There are, as we have said, three officers of the full inspectorial rank, all of whom have been superseded. All of them have excellent official records of services performed; they have all held very important administrative posts at naval hospitals at home and abroad; one was specially promoted for professional ability; they have all served for periods qualifying for their promotion and have, as a matter of fact, been promoted to the highest rank and consequently had every right, as far as we can see, to expect that one of their number would have been selected to fill any vacant post for which their rank and position in the service rendered them eligible. As far as their official records go they possessed qualifications which were altogether superior to those of the officer upon whom the appointment at Haslar has been conferred. They had experience as medical administrators which had been practically tested at home and abroad as well as greater length and variety of service than their more fortunate junior, who has been for many years employed in office work in London and whose hospital experience has, we believe, been limited to a year's service in the naval hospital at the Cape of Good Hope. It must be borne in mind that even the First Lord of the Admiralty is no judge of a medical officer's administrative and professional merits: as regards these he must mainly depend upon the opinion of those better qualified than himself to form and express an opinion; and we should have had much greater confidence in the justice and correctness of Mr. GOSCHEN'S ruling in this matter if he had stated that in making the selection which he has made for Haslar Hospital he had done so with the concurrence and support of the head of the Medical Service of the Royal Navy; but any reference to his having been so guided was conspicuously absent from his speech.

It is much to be regretted, we think, at the present time that anything should take place calculated to shake public confidence in the conduct and administration of our public medical services. We have often said that what is best for the public as a whole is best for the medical services and their officers, but we cannot feel at all assured that Mr. GOSCHEN'S action in regard to the appointment at Haslar is best for one or for the other. Mr. GOSCHEN'S ability, integrity of purpose, the interest he has taken in the naval service as a whole and the labour he has bestowed in order to increase its strength and efficiency, are so well known that his action in this matter only becomes the more inexplicable. We can only hazard the conjecture that he has been very badly advised by someone outside the naval medical service into making a serious mistake which, instead of confirming, he should lose no time in rectifying.

DR. BRADBURY in his Croonian Lectures will not be followed by all practitioners in his learned discussion of the nature and action of hypnotics, their subtle relations to each other, and the immense physiological differences which are caused by the substitution of one for another or of one radicle or element for another. But he will be credited by them with having reached, after his prolonged excursions into high organic chemistry and the physiological action of hypnotics, some very sound conclusions for the guidance of medical men in their advice to patients on the subject of sleep and sleeplessness. Insomnia is not a new complaint, but it is one of those evils which are on the increase. The complications and the pace of life and the competition in business and in professions explain this. In the sleepier days of our forefathers insomnia was not only probably rarer than now but when it occurred it was less felt and sooner cured. But at the present day we depend for our activities more on sleep than they did, while we reserve less time for it. When once the regularity of sleep is broken or the state of "cerebral stability" is disturbed it becomes difficult to find the conditions for the rectification of the evil. At the same time men are more irritable, more intolerant and impatient of the set of symptoms and sensations which insomnia generates than they were formerly, and being richer in drugs for this as for all other purposes, they fly to the last nostrum of the newspapers for the "sweet oblivious antidote." The insomnia of our present crowded life is probably increased by the use of alcoholic stimulants. There are circumstances in which alcohol is itself a good hypnotic. We have known even a glass of beer act like a charm when more costly and stronger forms of alcohol and other hypnotics have failed, although this result was probably due to the hops as much as to the alcohol. But alcohol is a two-edged sword and, with all its reputation as "a night-cap," probably causes more insomnia than it relieves. Used frequently in the day as a stimulant to meet the worries or the temporary fatigues of everyday life it produces a restless and excitable state of the nervous system which is very unfavourable to sound sleep and a very frequent cause of insomnia.

The value of Dr. BRADBURY'S lectures is twofold. First, in that he gives his readers an exposition of the latest theories of sleep in the light of recent discoveries as to the ultimate structure and functions of the nerve centres and their elements; and, secondly, in that he conducts them after an exhaustive account of recent researches into the chemistry and physiological action of hypnotics to sound conclusions as to the proper treatment of sleeplessness based as much on medical experience and common sense as on recondite investigations into the subject which are still in too imperfect a state to afford much assistance n the urgent sphere of clinical medicine. The lectures appeal to practitioners chiefly when they come to the practical question of the treatment of insomnia

and here, as at the outset, Dr. BRADBURY expresses the opinion that drugs are often valuable in sleeplessness, but hastens to add that "they should never be used in a routine manner." This of late years has been the very manner in which they have been used—as if all sleeplessness was of the same kind and had the same foundation and as if there were no individuality in human nature. There is no complaint in which the personal equation has to be so much considered as in that of sleeplessness. The amount and depth of sleep vary with each person. The sleep of one person is profound; that of another is vigilant, disturbed by the slightest noise or the faintest light. The amount of sleep required by one person is quite different from that needed by another. Dr. BRADBURY makes a strong point of this and happily defines sleeplessness "as a loss of the normal amount of sleep."

When consulted about sleeplessness the duty of the medical man is first to ascertain the particular facts of his patient's habit in regard to this function and then to try to find out the particular cause which for the time being is affecting his power to sleep. Dr. BRADBURY'S list of causes is very simple and inclusive. He classifies them under four heads: (1) irritative causes; (2) toxic causes; (3) psychical causes; and (4) causes arising from changes in the mode of life. Under one or other of these heads it is undoubtedly possible to include most cases of sleeplessness; under the first, pain, pruritus, uneasy sensations, cold feet, indigestion, visceral disturbances, &c. Under the second Dr. BRADBURY includes alcoholism, nicotinism, the exanthems, febrile disorders of all sorts, tea, coffee, and cocoa, and also the demoralisation of certain drug habits, as in opium eaters, the victims of cocainism, sulphonalism, &c. Like a good physician Dr. BRADBURY'S principle is to find out the cause and to remove it. *Tolle causam.* It was the contempt for this simple rule of practice which led HAHNEMANN into the errors by which he misled himself and his followers. But we are brought back to it by every sound physician whatever his knowledge of details and research, and the use of all the hypnotics in the Pharmacopœia apart from attention to this principle, will bring little relief to the patient and little credit to the physician. It is not the least virtue in Dr. BRADBURY'S conclusions that they coincide with those of other physicians who have given special attention to the subject. Hypnotics are to be avoided until all serious errors of health and habit which can be corrected without their use have been dealt with. When they must be used the simplest and the most harmless of them are to be preferred, especially the bromides. When the use for them has ceased they are to be discontinued Like other authorities—notably Dr. BALFOUR of Edinburgh—Dr. BRADBURY speaks highly of chloral in the insomnia of delirium tremens with if necessary a little tincture of digitalis where there is much cardiac weakness. He speaks with proper caution of the use of opiates in bronchitis as depressing the respiratory centre, but in small doses as in the pilula ipecacuanhæ cum scillâ of the British Pharmacopœia it is of inestimable value for inducing sleep and controlling nocturnal cough which interferes so much with rest. Dr. BRADBURY'S remarks on the use of chloralamide and paraldehyde in cases of insomnia continuing after the crisis of pneumonia and on the drug treatment of the sleeplessness of asthma, pleurisy, and other diseases are well worthy of attention.

There are few more pitiable cases in medical practice than those of persons suffering from insomnia, whether men or women or even children. Yet in many cases a little careful attention on the part of the practitioner will reveal the cause which may be obvious and removeable. Errors of digestion, errors of habit, overwork, slight unrelieved unconsidered causes of irritation—the physical, at any rate, if not the mental—will be found to admit of ready correction. Not infrequently a slight degree of pyrexia, scarcely noticeable in the morning but enough at night to make sound sleep impossible will be discovered, and will be early removed with attention to diet and to the functions of the liver and kidneys. It is the advantage of the general practitioner to get a deeper insight into the social and domestic circumstances of patients than is always vouchsafed to consultants. In these often lies the secret of wakeful nights, and it is not seldom in his power to give a little sound advice, the potency of which is beyond that of mere drugs. It is most gratifying to read that the use of hypnotics by the public is on the decline. They are indispensable in the skilled hands of the medical practitioner, but they are simply poisons when used indiscriminately by the public and are very likely to lead to a speedy exaggeration of the insomnia for which they are taken and to the destruction of health.

WE published not long ago a brief account of the strained position existing at Stockport between the local medical men and the officials of the Stockport Centre of the St. John Ambulance Association.[1] It may be remembered that in consequence of the proceedings which occurred at a public meeting in Stockport which were subsequently reported (not too accurately) with comments (not too politely worded) in certain newspapers, the Stockport Medical Society unanimously resolved as follows[2]:—

That in consequence of the offensive references and objectionable conduct of the local honorary secretary of the Stockport Centre of the St. John Ambulance Association to the medical society and some of its members individually, prior to and arising out of the public meeting held in the Pendlebury Memorial Hall on Feb. 7th, 1899, the members of the Stockport and District Medical Society will reluctantly be compelled to abstain from lecturing in connexion with the local centre as at present constituted until the local honorary secretary withdraws and apologises for such references and conduct. And the society further suggests that the past management of this centre be officially inquired into by the Central Executive Committee in London.

We thoroughly endorsed this resolution of the Stockport Medical Society at the time and if the circumstances are unaltered we hope that the society's attitude is also unaltered; while we can only suppose that those responsible for the behaviour of the Association towards its medical lecturers were instigated by ignorance of the real relation in which the medical profession stands towards ambulance work generally and towards the St. John Ambulance Association in particular.

The St. John Ambulance Association is the Ambulance

[1] THE LANCET, March 25th, 1899.
[2] THE LANCET, April 8th, 1899.

Department of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England. The St. John Ambulance Brigade is approved by the Order as affording a "union in one body of the Ambulance and Nursing Corps and Divisions connected with the Ambulance Department of the Order of St. John for combined drill and other purposes" (we quote from the General Regulations of the Brigade) and the objects of the Brigade may be briefly summarised as follows: (1) to afford holders of first aid certificates from the St. John Ambulance Association opportunities of meeting together for ambulance and nursing practice; (2) to render first aid to the sick and injured on public occasions and to maintain in readiness for such duty trained men and nurses; and (3) to enlist civilians qualified in first aid to be placed at the disposal of the military at home or abroad. The qualification for membership of the Brigade is, says General Regulation No. 14, "the obtaining of a certificate in first aid from the St. John Ambulance Association. We see therefore what the Association is. It is a body with local centres which first trains and then examines laymen in ambulance matters. Upon the result of such training the successful candidates alone are qualified to join the Brigade. The Brigade thus recruited by the Association has for its object *surgical work*—that is, it exists to provide for the use of the community in peace or war a body of civilians who shall be able to assist the surgeon intelligently.

When the relation of the medical profession towards the St. John Ambulance Association is considered in the light of the General Regulations of the St. John Ambulance Brigade it will be seen that if it were not for the medical profession the Association could not exist. How, then, comes it about that we should have to chronicle a position like that at Stockport, or to publish a correspondence like that which recently passed between Mr. VALENTINE MATTHEWS[3] and Sir HERBERT PERROTT, the chief secretary of the St. John Ambulance Association? In each case a tone is adopted by the lay officials of the Association towards their medical examiners which is not only offensive in manner but very extraordinary when we consider that the St. John Ambulance Association is to this extent a medical body—that its only value whatever to the community is derived from its medical examiners. In our opinion we have here the old story of the medical man making himself too cheap and finding as a consequence that his services are not properly regarded. Far too much work is done gratuitously by the medical profession for the St. John Ambulance Association and occasionally we fear that some of this work is not done from the best of motives. To be a lecturer for the Association is a method of becoming known to the public, and young men starting practice in localities where they are quite unknown have seen in the office a useful introduction. The St. John Ambulance Association has found out the weakness of some of our profession and has been able to obtain readily men who will do its work for nothing, enabling it to save money by placing the former examiners whom it had to pay upon the shelf. The medical profession should not do the work of the St. John Ambulance Association gratuitously, and if the Association knew better than it seems to know how to advance its own position and the objects of the Brigade on behalf of which it recruits, it would recognise the necessity of exercising every care in the selection of its lecturers. Efficiency should come first and economy afterwards. The St. John Ambulance Association should maintain a uniformity of standard for examinations and the simplest way to do this would be to keep the examination board numerically as small as possible. Then the examiners, knowing what is required of them and familiar with the rules of the Association, would not be likely to make mistakes. It is evident that many of the present examiners do not know what is required of the candidates. The St. John Ambulance Association should also remember that it owes politeness to its medical colleagues, if only because proper ambulance instruction for the good of the community can be given without the aid of the Association but not without the aid of the medical profession.

[3] THE LANCET, June 3rd, 1899.

Annotations.

"Ne quid nimis."

THE ASYLUM POPULATION AND PHTHISIS.

THE frequency of phthisis in the insane community and the large mortality resulting therefrom are facts of considerable importance. Phthisis is three times more common among lunatics than in the sane community. The deaths from phthisis for the year 1897 as shown by the report of the Lunacy Commissioners are for English asylums 15 per cent. of the total mortality. This is in itself a large proportion and yet it is rather more than doubled in the case of the population of Irish asylums where the mortality from phthisis reaches the proportion of 31½ per cent. As regards lunatics phthisis is said to be more prevalent in those suffering from the "depressed forms" of mental disease, while it is very common also among chronic epileptics, and its frequency both as a factor and as an accompaniment of idiocy and imbecility is well known. Some of these facts are apt to sound a warning note suggestive of overcrowding and inadequate sanitation, and that such evils have long existed singly or combined in our public asylums is probable enough. But the *fons et origo mali* lies deeper and is, we think, to be sought in the debilitated and insanitary conditions of home life which history shows to surround and furnish the larger proportion of our asylum admissions. Unfavourable environments at home and in occupations pursued account largely for the high rate of phthisis in lunatics. The enormous proportion of phthisis in some of the Irish asylums—e.g., Monaghan, 35 per cent.; Sligo and Killarney, 38 per cent.; Cork, 46 per cent.; and Carlow, 56 per cent.—can to some extent be accounted for in this way. Putting this question as to its mode of origin aside, however, it appears that very little has as yet been done to combat the evil and to minimise the risk. The means we refer to are isolation, segregation, and open-air treatment, and sterilisation of milk and food-supply. Some of these are well-worn themes, and yet, taken together, they apply with peculiar force and fitness to our asylums. The modern lunatic asylum is in many respects ideally situated as a sanatorium for physical health. Standing as it generally does on extensive grounds, remote from the dust and smoke of cities and on high

ground, it readily offers facilities for the mode of treatment—"open-air treatment"—required. A few of our asylums have already, as can be seen from their annual reports for 1898, started to carry out this mode of treatment, and have set the good example of building separate isolation blocks for male and female patients. The necessity for the latter is obvious, for the good results of treatment by day can only be maintained by efficient sleeping accommodation by night and by the effective isolation of the phthisical patient from his more fortunately placed non-phthisical brother. It is to be hoped that our public asylums as well as private asylums will be encouraged and enabled to carry on the good work in both the directions indicated above. The initial cost of building must of course always form an important item for consideration, but committees would no doubt vote and grant freely the sums needed when the matter was placed before them in its true light. At a recent meeting of governors of the Richmond District Asylum at Dublin Mr. Conolly Norman read a report written by the Inspector of Lunatic Asylums (Dr. Courtenay) recommending measures of the kind referred to above. Mr. Norman pointed out to the committee of governors that it was indispensable to provide for each sex an isolation wing and the recommendation was adopted. A word is needed regarding milk-supply in public asylums. The majority are provided with farms and dairies and keep their own stock of milch cows. The daily consumption of milk in a large institution (say, of from 1500 to 2000 inmates) would be from 120 to 200 gallons. The virulence of tuberculous milk is now well known and it is found to exceed by far that of tuberculous meat. The Royal Commission on Tuberculosis appointed in 1897 to inquire into "the administrative procedures for controlling the danger to man through the use as food of the meat and milk of tuberculous animals" presented their report in 1898. We find that while differing to some slight extent as to the amount of danger existing in the use of tuberculous meat they entirely endorsed the finding of a previous Royal Commission (of 1890) as to the grave danger arising from the consumption of tuberculous milk. They found, also, that cows contributed far more than did oxen to the record of tuberculous cattle and made certain recommendations, such as notification of disease of the udder in the cow. Were all the cows periodically examined for tubercle, and were also milk Pasteurised (i.e., heated to a temperature of from 155° to 160° F. for 20 minutes) before use, much might be done in our asylums to limit in this direction also the prevalence and the spread of tuberculosis.

THE COMING CENSUS.

IT is satisfactory to see that medical officers of health in different parts of the country are recognising the necessity of impressing upon the Government the importance, from the point of view of trustworthy sanitary and social statistics, of providing in the Act for the Census of 1901 for an intermediate Census in 1906. At the recent annual meeting of the Yorkshire Branch of the Incorporated Society of Medical Officers of Health Dr. Spottiswoode Cameron of Leeds read a paper calling attention to some of the directions in which the national census enumerations might be made more useful and more helpful to medical officers of health and to the serious extent to which the value of mortality and health statistics have been depreciated by the impossibility of securing a trustworthy population basis in the latter half of the present intercensal period of 10 years. It is almost impossible, from this point of view, to exaggerate the importance of a quinquennial numbering of the population, more especially in urban and suburban districts and it is reasonable that medical officers of health should press for sex and age statistics in addition to the mere numbers at the intermediate enumerations. If local medical officers of health would use their best endeavours to press upon their Parliamentary representatives this demand for more frequent enumerations and the importance of passing the Census Act early next session in order to secure sufficient time for well-considered preparatory measures, they would materially assist the efforts which are being made in this direction by the Royal Statistical Society and other societies and public bodies. If these objects could be attained the subsidiary matters which are dealt with in the eight resolutions formulated by the Parliamentary Committee of the Incorporated Society of Medical Officers of Health might be submitted later for the consideration of the Registrar-General and of the Local Government Board, as they are of an administrative rather than of a legislative character. It is but natural that medical officers of health should be anxious for census statistics for smaller areas than those for which they have hitherto been published in the census reports. It is not quite clear, however, when Dr. Cameron asks for occupation statistics in sub-districts, whether he intends that these figures should be published, or whether he only asks that medical officers should have access to them. We may point out in passing that age statistics were published in the census report for 1891 for each registration sub-district as well as for each urban or rural sanitary district in England and Wales. It is not quite clear that the Parliamentary Committee of the Incorporated Society of Medical Officers of Health and Dr. Cameron are aware of this. It is most important that all doubts as to what changes in the tabular arrangement of the report on the Census in 1901 are really desired by medical officers of health should be carefully considered and settled before this time next year when it may be hoped that the Census Office will be engaged upon preparatory arrangements. In the mean time all present efforts should be concentrated upon obtaining the interest and support of members of Parliament in the promotion of satisfactory Census Acts for the three parts of the United Kingdom.

THE PREVENTION OF SUMMER DIARRHŒA.

DR. HENRI DE ROTHSCHILD has contributed a timely article on the digestive disturbances of infancy to the *Journal de Clinique et de Thérapeutique Infantiles* of June 15th. The subject is one which has been often discussed, and we shall not, therefore, examine it in the same exhaustive manner as the writer of this paper has done. There is one important section of it, however, which constantly claims the attention of practitioners—the toxic and acute form of gastro-enteritis. The return of sultry weather after some days of rain is certain to set in motion that army of morbid germs which need only the coöperation of human neglect in order to ensure a high mortality from summer diarrhœa. Dr. de Rothschild rightly associates this result when it occurs with changes in the milk diet of infants. That local telluric and atmospheric changes exercise an important influence we do not deny, for the bacillus morbi is in and behind all these. At the same time, the fact cannot be too strongly insisted on that the most ready and most usual means by which the source of infection reaches the child is its natural food, and this is more especially, almost exclusively, true where the infant is brought up by hand. So much has been said, written, and taught about sanitary cleanliness that many parents and nurses who formerly may have practised very haphazard methods in the administration of infants' food have now learned to be sufficiently careful in the all-important matter of antiseptic cleanliness. Feeding bottles are much more scrupulously cleansed after each time of use than they were wont to be and, what is of much consequence, they are

frequently boiled when temporarily out of use. They are better constructed with a view to their being cleansed easily, and in this connexion we have observed that the older type of straight bottle is in very general employment. A further measure of security is attained by the substitution of carefully sterilised milk for the ordinary product which, however pure, is, especially under the conditions of crowded town life, more liable to fermentative change. Dr. de Rothschild speaks truly when he attributes to such precautions as these the happy result that infantile diarrhœa of the toxic type is rarer to-day than it was in years gone by. It is necessary to remember that this result is not due solely to the use of improved appliances, but quite as much to more scrupulous care on the part of nurses, as well as to a better understanding of the value of fresh air and other aids to sanitary cleanliness. It is among the dwellings of the poor that the need of these is most felt, and it is here that practitioners and local authorities may most usefully exert themselves in the direction which we have indicated.

CERTAIN CLINICAL AND ETIOLOGICAL ASPECTS OF DELIRIUM TREMENS.

MUCH of the problem regarding the pathogenesis of delirium tremens is still obscure and awaits solution. The clinical aspects of it which have a more direct bearing on its causation have of late received considerable attention and study. Thus during the past year important contributions have been made to the subject. Dr. Jacobsen of Copenhagen has published an important research based upon the study of 124 cases, while a second contribution from the pen of Dr. Villiers of Brussels includes observations made on 100 cases at the St. John's Hospital in Brussels. A Danish physician, Dr. Hertz, has also published in the *Hospitalstidende* a contribution on the Pathogenesis of Delirium Tremens, of which an abstract by Dr. Früs has just been published in the *Journal of Mental Science* of April, 1899. All these studies contain facts of more or less importance and with a more or less practical bearing, and they may be briefly summarised as follows. 1. As regards age there is nothing specific to note; it may vary from 25 to 90 years. 2. All the patients were chronic alcoholics, whose beverage consisted of beer, wine, or spirits. It was generally observed that the quantity of alcohol (calculated from its percentage quantity in the actual liquor consumed) necessary to produce the delirium was about half a pint a day. 3. Though fever was a common occurrence, yet it was not a necessary concomitant in the development of the delirium for it was not invariably present. 4. The commonest visceral troubles accompanying the disease were catarrhal pneumonia and acute or subacute nephritis. Other conditions such as cardiac disease and phthisis if present were to be regarded as complications not necessarily associated with delirium tremens, and in the same category should be placed arthritic affections. Thus in 100 cases of delirium tremens, Dr. Villiers found the following complications—viz., cardiac disease (eight cases), pulmonary tuberculosis (two cases), traumatism (two cases), and arthritis of the knee-joint (one case). 5. Albuminuria was present in a varying proportion of cases—viz., 16 per cent. according to Dr. Villiers, 60 per cent. according to Dr. Jacobsen. Dr. Hertz's observations, on the other hand, show that uncomplicated delirium tremens is always accompanied by a disturbance of the renal functions—an acute nephritis—with accompanying albuminuria. This acute nephritis, according to the same observer, is primary and antecedent to the delirium. In all of Dr. Jacobsen's and Dr. Villiers's cases the albuminuria was temporary. Its permanence would have indicated organic renal disease which, therefore, must be regarded as absent in these cases. 6. Of the 124 cases of Dr. Jacobsen 119 patients lost weight during the illness, the losses varying from 100 grammes (about four ounces) to 6500 grammes (14·3 pounds). 7. Insomnia was a frequent and distressing feature. Of Dr. Villiers's patients 26 suffered from it for two days, 39 for three days, 22 for four days, and 10 for five days. 8. The severity of the disease and its mortality varied considerably. Dr. Villiers's cases in Brussels showed a mortality of 1·5 per cent., while Dr. Jacobsen's results at Copenhagen indicated a death-rate of 13·4 per cent. Delirium tremens is much milder and has fewer complications and is of less gravity in Brussels. The explanation of this lies not so much in the racial factor or in the quantity of alcohol drunk—which, it may be stated, is the same in both—as in the bodily factor—viz., the constitutional condition of the drinker at the time of onset of the delirium. The Germans who have drunk beer from their youth are stated to suffer more frequently from enlarged stomach, fatty heart, and damaged kidneys, and would therefore suffer more readily and more severely from delirium tremens as a result of free indulgence in strong spirits. 9. From the above results there is every reason to suppose that delirium tremens is an acute auto-intoxication of the brain following the insufficient performance of renal function as regards the elimination of autotoxic products as well as of alcohol. The special form which it takes—viz., hallucinatory and terrifying visions, tremor, wasting, and rapid though temporary constitutional breakdown—is attributed to its occurring, as it almost invariably does, in subjects debilitated by habits of previous alcoholic indulgence.

EGYPT AND THE PLAGUE.

THE campaign in Egypt against plague has manifestly been carried on *à la* Sirdar—that is, with energy, skill, and—what under the circumstances was of greater consequence than either—authority. If this were not so the situation at the present moment would necessarily be far graver than happily is the case. The disease was first recognised at Alexandria on May 4th, and from that date up to July 5th 57 cases in all occurred, with 21 deaths. In a city with a population of 320,000, for the most part densely packed, these figures make very little numerical impression on the bills of mortality, the increment to the ordinary death-rate during the nine weeks being equal to no more than one per cent. Judging by the total number of deaths from all causes no stranger would ever suppose that an epidemic of plague was raging in the country, and yet if he were to allow himself to be guided by what has been written on the subject in certain papers he might readily arrive at that conclusion. A widespread feeling of dissatisfaction is said to exist in Egypt on account of these reports, which are characterised as sensational and untrue. In one prominent instance the writer contends that he is justified in warning the public against Egypt because the shores (*sic*) of the Suez Canal are infected, and then immediately afterwards he admits that the disease is confined to Alexandria. Apparently this enlightener of darkness is under the impression that Egypt's principal seaport is in the immediate vicinity of the great watercourse. Egypt depends for much of her prosperity on the influx each winter of tourists from both the Old and the New Worlds and naturally many of these seekers for health or diversion would hesitate to pay their projected visit if they thought they ran any risk either of acquiring the disease or of being placed in quarantine through its virulence. In his report for 1897[1] Lord Cromer quotes Sir J. Rogers as follows: "There is but one satisfactory way to safeguard a country against cholera and that is to put it in such a sanitary condition that the disease will not find a

[1] Egypt, No. 2 (1897). London: Eyre and Spottiswoode.

favourable soil for its development. In this respect practically everything remains to be done in Egypt," and Lord Cromer adds: "There can be no doubt of the truth of these remarks. ..... I do not doubt that the day of the Egyptian sanitary reformer will come, but I fear, though I say it with regret, that some little while must yet elapse before the question of improved sanitation in Egypt can be taken seriously in hand." This is rather disheartening, considering that at the time these words were written England had been in Egypt for 14 years. Lord Cromer is of opinion that sanitary reformers require immense sums of money to work with, and such no doubt is the case if all that is desirable is to be attempted. There is scope in Egypt, however, for much comparatively inexpensive sanitation, and if the whole of the money needed cannot be granted at present we trust it will be found possible, now that the Soudan question has been settled, to increase the totally inadequate sanitary budget by a substantial addition.

THE IMITATIVE ELEMENT IN CRIME.

MORE than once we have commented on the "contagious" effect of crime, particularly when sensational or dramatic in its tenour, and the last few months have supplied us with striking instances in point. In THE LANCET of June 24th, p. 1747, our Rome correspondent described the tragic death of the "Medico Primario" of the Santo Spirito Hospital—stabbed in the neck by a vindictive artisan who, having received all the benefit which that institution could vouchsafe, felt aggrieved at being sent out to resume his bread-winning and to make room for cases more urgent. The murder was committed with a large, long, rusty nail, sharpened at the point till it became a stiletto—an almost exact replica of the weapon with which Luccheni assassinated the Empress of Austria just 10 months before. It was thrown into the Tiber when it had served its purpose, but the lay press described it all too faithfully for it to escape the notice of imitators of its wielder. In fact, the Roman journals a few days after the murder put the following occurrence on record. At the same Santo Spirito Hospital a woman presented herself with a request to see a phthisical patient whose name and number in the ward she gave correctly. Admitted to an ante-room she somehow excited suspicion on the part of those in attendance. She was searched and was found to be in possession of "a large, long nail, sharpened at the point," wrapped up in a packet, and exactly like that with which Dr. Bondi had been murdered. She was of course arrested and in subsequent examination confessed that the nail was "destinato all' ammalato" (destined for the patient). But for this opportune detection the woman might have been the medium of another assassination on the lines of that perpetrated by Romanelli and by Caioni, all in the same hospital, and all by phthisical inmates. These two miscreants, it appears, come psychologically and physiologically under the "hysterico-epileptoid" category—a type of "developmental retrocession" carrying with it an ape-like or "pithecoid" imitativeness, manifested also in others (Luccheni, for example) whose deeds of violence betray a family resemblance down to their *modus operandi* and even their instruments. The theme possesses a gruesome fascination for more than the criminal anthropologist and will doubtless receive full justice at the hands of the Lombrosos and the Ferris who at the International Congress at The Hague will maintain with even greater eloquence than they did at its Geneva predecessor the existence, nay, the increasing prevalence, of the "born criminal." Meanwhile, the "contagious" effect of crime operating on those whose "pithecoid imitativeness" is part of their "retrocedent organisation" is sufficiently established to enhance the regret that lay journalism, within its undoubted province of describing current events, inevitably panders to the morbid craving of which the said "imitativeness" is an expression and neutralises much of its undoubted benefit by helping to diffuse the "criminal contagion" of which Italy and Rome so vividly illustrate the effects.

THE MEMORIAL TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

IN reply to numerous inquiries the honorary secretary of the Society of Members of the Royal College of Surgeons of England asks us to state that a copy of this memorial will lie for signature at 11, Adam-street, Strand.

BEDFORD COUNTY HOSPITAL.

ON June 21st a new hospital for Bedford, erected in place of the Bedford General Infirmary which was founded in 1802, was opened. The infirmary was built in consequence of the bequest of Samuel Whitbread of Bedfordshire and Hertfordshire who left a sum of £8000 upon trust for the erection and endowment of a public hospital or infirmary. The accommodation of the infirmary was sufficiently adequate for the needs of the infirmary when first planned, but it has since become necessary to increase the accommodation provided in the old building as well as to make many improvements. At the suggestion of Mr. Samuel Whitbread, great-grandson of the founder, the county of Bedford was appealed to for funds, the subscription list being headed by the Duke of Bedford and Mr. Whitbread, who gave £5000 each. The new buildings, of which Mr. H. Percy Adams is the architect, cover over 10 acres of ground, are 95 feet above the level of the sea, and are erected on a bed of hard gravel. The wards, which are built on the pavilion system, are three in number and will accommodate 90 men, women, and children. The air space per bed is 1513 cubic feet. Ample and convenient accommodation is provided for administration and for nurses, &c., and there is a well-furnished and tastefully decorated chapel. Everything seems to have been done that was possible to bring the hospital in a line with modern standards, and the architect and all concerned in its erection are to be congratulated. The total cost is estimated at £38,000.

THE WRITINGS OF MR. HAVELOCK ELLIS.

IN two of the June numbers of the *Maryland Medical Journal* Dr. William Lee Howard of Baltimore blames the unwillingness of some medical men to treat patients whose symptoms, whether bodily or mental, are related to the sexual organs or functions, and he vigorously denounces the prosecution last year of the London agent for the sale of Mr. Havelock Ellis's book, "Sexual Inversion." He maintains that a recognition of the pathological states of the sexual centres as demonstrated in certain psychical conditions and morbid acts, together with a full comprehension of the power of association and suggestion in the adolescent sexual neuropath, are essential for medical practitioners, and he argues that if a pathological state such as congenital sex perversion is too disgusting to be recognised, then a pathological state producing syphilitic sores of the genitals ought by parity of reasoning to be too filthy to be treated. He had been hoping that Mr. Havelock Ellis's prohibited book would have had the effect of bringing English medical men and publicists to understand that a human being is just as liable to have the growth in the cells making up the sexual centre disturbed and distorted as in the cells making up any other centre, physiological or psychical, from which it follows that it is unreasonable to send a man to prison because he is deformed

in certain psychical centres. Mr. Ellis's book he describes as a classic, saying that it is cleaner, has more of the scientific atmosphere, and shows greater study and research than any of the works hitherto published on the subject, not excepting those of Krafft-Ebing or Schrenck Notzing.

RECOVERY AFTER TAKING A LARGE QUANTITY OF CORROSIVE SUBLIMATE.

THE following case of poisoning by corrosive sublimate which was published in the *Gazette Médicale du Centre* of June by Dr. Joulia is remarkable in that recovery followed such a large dose. A woman, aged 28 years, desiring to poison herself on account of a love trouble, took dissolved in Malaga wine the contents of two packages of corrosive sublimate (made up for baths). She swallowed exactly 370 grains of sublimate and the same quantity of tartaric acid. When seen she was incessantly vomiting and only asked for drink. The pulse was 140, small and irregular. The tongue, mouth, and pharynx were dark red and swollen. The stomach was immediately washed out. The tube was introduced with pain and difficulty whilst the patient was hiccoughing. 35 pints of albuminous water to which flour was added were used. An emetic of ipecacuanha was then given. The patient was collapsed; three and three-quarter grains of caffeine were injected and the pulse gradually improved. Swallowing was intolerable, only ice could be taken. On the following day there were complete anuria and diarrhœa. On the third day 10 ounces of urine containing albumin, blood, and casts were passed. Recovery ensued. The patient undoubtedly owed her life to the fact that her stomach was so thoroughly washed out a quarter of an hour after taking the poison.

PLUMBISM AND APPENDICITIS.

RECENTLY [1] we called attention to some cases of plumbism reported in the *Journal of the American Medical Association* by Dr. J. P. Lord in which the intestine was contracted so as to resemble a solid cord and appendicitis and other abdominal conditions were simulated. A paper read before the Société Médicale des Hôpitaux of Paris on June 16th by Dr. Le Gendre is of interest in this connexion as, whilst in no way invalidating the observations referred to, it presents the subject in an entirely new light, for not only has lead colic been mistaken for appendicitis, as Dr. Lord has shown, but, conversely, appendicitis in the subjects of chronic plumbism has been mistaken for lead colic. Further, Dr. Le Gendre brings forward evidence to show that lead colic may be followed by appendicitis and that the latter may be a result of plumbism. Dr. Le Gendre first quotes two cases published in the *Presse Médicale* of March 8th by Dr. Sergent, which show the difficulty of diagnosing between lead colic and appendicitis. A painter, the subject of chronic plumbism, was seized with acute abdominal pains which he recognised as lead colic and which were accompanied by symptoms so typical that his medical attendant had no doubt as to the diagnosis. The patient died from subacute appendicitis without any apparent signs of general peritonitis. At the necropsy a gangrenous appendix perforated in two places was found. This experience enabled Dr. Sergent to diagnose appendicitis in another case of plumbism. The patient entered hospital for lead colic—a diagnosis which was adopted by the *interne*. Operation showed appendicitis of the hypertrophic follicular form. In a case under the care of Dr. Le Gendre the same mistake was made; but the *interne* noticed that the tenderness was sharply localised to McBurney's point and that there were slight fever and rapid pulse. The course was that of mild appendicitis and recovery took place without purgatives.

[1] THE LANCET, May 20th, p. 1380.

But there is another aspect of the question. Lead colic and appendicitis may occur successively in the same patient, as the following case shows. A grinder of colours, aged 25 years, was admitted to hospital a second time for lead colic. There were constipation, general abdominal pains, and vomiting. The abdomen was hard and tense and flat rather than tympanitic; moderate pressure was painful and deep pressure even in the right iliac fossa diminished the pain. The face was pale, there was a well-marked blue line on the gums, the breath was fœtid, and the pulse was 42. On the third day there was a considerable stool, but the symptoms persisted and the temperature rose to 103° F.; vomiting recommenced, and the appearance of the abdomen altered. It became tympanitic and tender to even superficial pressure, but the tenderness was confined to the hepatic and right iliac regions. The patient hiccoughed frequently. Later the greatest tenderness was definitely confined to McBurney's point and in this position there was well-marked "muscular defence." Dr. Le Gendre's surgical colleague, M. Chaput, confirmed the diagnosis of appendicitis and offered to operate, but the patient declined. Recovery ensued. Tenderness at McBurney's point remained for some days after the disappearance of the other symptoms. The connexion between the lead colic and appendicitis might be explained by supposing that the lead acts injuriously in some way on the appendix so as to favour infection.

COLCHESTER TOWN-HALL: A GIFT FROM MEDICAL MEN.

WE have received an illustrated pamphlet giving a description of a magnificent town-hall and municipal buildings which it is proposed to build for Colchester. The principle of erecting such parts of the structure as are necessary for the administration of the town and for the use of the inhabitants at large at the public expense has been adopted, leaving the embellishment of the building to the munificence of private benefactors. Many gifts have already been received by the committee and many more which are required should be forthcoming soon, for the scheme of embellishment as set forth provisionally in the pamphlet is not only beautiful but educational, the history of Colchester, so far as it can be portrayed in stained glass, in marble statues, in pictures, and in coats of arms, being a special feature of the scheme. The members of the medical profession in Colchester have undertaken to erect a marble statue of William Gilberd, M.D. Cantab. (*b.* 1540, *d.* 1603), the celebrated author of "De Magnete, Magneticisque Corporibus et de Magno Magnete Tellure, Physiologia Nova." He was chief physician to Queen Elizabeth and to James I. and for eight successive years held the office of Censor of the Royal College of Physicians of London; he was treasurer for nine years and President in 1600. He bequeathed his library, globe, instruments, and cabinets of minerals to this College. The scientific work of Gilberd was mentioned with respect in Bacon's "Novum Organum," and Galileo and Priestley bear testimony to the originality of his investigations. The suggestion that a statue of Gilberd should be placed in the new town-hall of Colchester was a happy thought, and it is quite fitting that the medical men of the town should make the gift.

FILARIAL METAMORPHOSIS IN THE MOSQUITO.

DR. T. L. BANCROFT of Burpengary, who is as well known as his late father was for his accurate observation of phenomena in natural history, has communicated an interesting letter to the *Australasian Medical Gazette* on the life-history of the house mosquito, an insect which recent work upon malarial infection has elevated into considerable

scientific importance. This mosquito, which it is thought has been introduced into Australia from Europe, can, according to Dr. Bancroft, be bred and kept in confinement in suitable vessels with the greatest ease. Tradition says that a mosquito lives a day or two; that it feeds but once, afterwards retiring to some quiet spot where the ova are matured, the eggs laid in water, after which it dies, and that the male mosquito does not feed. Dr. Manson thought that it rarely occurred for them to live seven days after their meal of blood. The investigations of Dr. Bancroft into filarial metamorphosis tallied exactly with those of Dr. Manson in respect to mosquitoes and also in respect to the metamorphosis, except in one important item. Dr. Bancroft had never seen the actively moving filaria, the last stage of the metamorphosis; but this he attributes to the fact that mosquitoes want to be fed, and that his died from starvation about the sixth day and before the filariæ had developed. In confinement it is necessary to feed mosquitoes. Various methods and foods were tried by Dr. Bancroft with very little success, until ripe bananas were given, which proved to be a most suitable food; it was noticed that both male and female mosquitoes sucked the juice of the banana almost every day. It was also found that mosquitoes would live in glass vessels up to two months; the life of a mosquito is therefore not one or two days, but a month at least, and frequently two months. The embryo filaria, Dr. Bancroft says, when it is taken into the mosquito's stomach measures $\frac{1}{75}$ inch in length by $\frac{1}{3000}$ inch in breadth; on the seventeenth day it measures $\frac{1}{75}$ inch by $\frac{1}{1500}$ inch, and it is not killed when put into water. He believes that water is the medium by which the young filariæ are transferred to the human host, and concludes by suggesting that experiments with a free pardon as a reward should be made upon life-sentenced prisoners.

PUBLIC VEHICLES AND INFECTION.

A CORRESPONDENT describes in another column how he recently observed an omnibus conductor who had heard a child cough in his vehicle question the person in charge of the child as to whether it was suffering from whooping-cough. On being informed that his lightning diagnosis was correct the conductor at once insisted on the child being taken from the inside of the omnibus to the roof, and the person in charge appears to have equally promptly acquiesced in his authority. Now, it is beyond question that if the conductor had found a person in his omnibus suffering from any of the diseases defined by statute as dangerous infectious diseases he would have had ample powers to deal with the matter, and severe penalties are provided for the person who travels when so infected or in charge of a child so infected. But whooping-cough is not a notifiable disease and it is therefore open to doubt whether the conductor described by our correspondent had any legal authority on his side in acting thus, or whether he exercised a rough-and-ready discretion on behalf of the public which would have the moral support of most travellers, particularly of those travelling with children who had not had whooping-cough, even while they sympathised, as we do, with the ejected child; but his legal position is not as clear as it should be, and there is no statute, as far as we are aware, either relating to public health or otherwise, which distinguishes classes of persons to be carried inside omnibuses from others to be lawfully carried outside. Those suffering from dangerous infectious diseases as defined must not be carried at all, and those who expose them so that they may infect others can be easily and effectively dealt with. The offence, however, of exposing a child with whooping-cough is not one provided by statute with a penalty which can be conveniently or promptly applied. Probably an indictment would lie at common law in such circumstances on the ground that the matter complained of constitutes a nuisance to the public, but the cases on the authority of which we say this are old ones dealing with the conveyance of patients suffering from small-pox before legislation had been attempted in such matters. With regard to any possible civil remedy by a person infected or whose children may be infected in a public street or vehicle the nearest authority which we can find is in a case reported in the *Times* of Nov. 9th, 1872, in which this question was raised but after some discussion allowed to drop owing to the plaintiff having already succeeded on another aspect of his claim, and we can find no later authority. With regard to the story told in the *Daily Chronicle* and forwarded to us by the same correspondent of how a lady taking her children to school had to sit in a railway carriage and, so to speak, watch them being infected with whooping-cough by the child of another lady, we fear that the drastic remedy of stopping the train by pulling the cord would hardly, even if the guard's attention were attracted, be recognised as a justifiable course by the railway company. We should have thought, however, that to insist upon the name and address of the offending lady being given and to bring an action for the loss and damage sustained as the natural result of her conduct would have been, at all events, an effective mode of retaliation assuming that infection took place. It is true that observations which fell from the court in the case in 1872 referred to are not altogether favourable to such an action, but times have changed and so have men's views on matters of sanitary precaution since 1872, and we believe that the lady described might very probably have been made responsible in damages for what she did. In any case the railway company must have had power to deal with her had the attention of its officials been called. There is a by-law approved by the Board of Trade and presumably adopted by most railways in some form or other which enables the company to refuse to carry any person who has any infectious disorder and to exact a penalty not exceeding 40*s.*, together with forfeiture of the railway fare, from any person either travelling when suffering from an infectious disorder or having charge of any person so travelling. It seems, however, to us that except in cases where this by-law may apply the public in general should be better protected against infection by diseases not formally recognised by statute as dangerous. We should also much like to see either a prosecution or a civil action, or possibly both, brought as suggested above in order that the existing law may be more clearly defined, and we believe that the publicity given to the matter by either procedure would impress a useful warning upon many selfish and reckless persons.

THE ROYAL INFIRMARY, PRESTON.

A MEETING was held at the Town-hall, Preston, on July 3rd to consider the reports bearing upon the proposed extensions and alterations at the Royal Infirmary. The gathering was a meeting of the executive and general committees of the Queen's Diamond Jubilee Fund, and Alderman Henry Davies, J.P., chairman of the committee of the Fund, presided. He explained that they were there to consider the report of the board of management of the infirmary to the committee. The Jubilee Fund amounted to £8000 and this sum was to be applied to carry out structural improvements and the erection of a new wing to be called the "Victoria Diamond Jubilee Wing." These works will absorb the whole of the fund. But a great deal more remains to be done and altogether it is wished to spend something over £21,000. One very necessary item is a new block for out-patients, for at present the out-patients have to be seen in the very centre of the administrative block, hence

the risk of infection spreading is by no means small. Another most crying want has been supplied by the generosity of Dr. R. C. Brown who, as was mentioned in THE LANCET of July 8th, has offered to defray the whole expense of a new operating theatre, the cost of which is estimated at £1650. Mr. Smith of Longridge has also sent in a donation of £250. The report was approved and it was decided to hold a public meeting to raise the further sum required. A warm vote of thanks was passed to Dr. Brown for his munificence and also one to Mr. Davies, the chairman of the committee of the Jubilee Fund. It is not often that a medical man's purse is long enough to enable him to give in terms of money, though there is perhaps no profession which does so much work for nothing. Not very long ago we had the pleasure of recording the gift of a large sum of money to the Norfolk and Norwich Hospital from Mr. Cadge, and Dr. Brown's gift is worthy to stand side by side with that of his East Anglian brother in the profession. Preston is happy in possessing, as the meeting showed she does possess, so many citizens who are ready to help the sick and suffering, not only with money but with their time, their work, and their best energies.

PRESERVATIVES AND COLOURING MATTERS IN FOOD.

WE are surprised to learn in accordance with an announcement in the *Times* on Thursday that the Departmental Committee appointed to inquire into the use of preservatives and colouring matters in food has only just recently been formed. The following gentlemen have been selected to serve: the Right Hon. Sir H. E. Maxwell, M.P. (chairman), Professor Thorpe, V.P.R.S., Dr. H. Timbrell Bulstrode, and Dr. F. W. Tunnicliffe with Mr. C. J. Huddart of the Local Government Board as secretary. This announcement confirms our opinion that the new Food and Drugs Bill will not receive serious consideration this session, since such a measure could not be complete without some provision relating definitely to the control of preservatives and colouring matters in food.

THE LIVERPOOL SCHOOL OF TROPICAL DISEASES: THE EXPEDITION TO WEST AFRICA.

THE Government departments interested in the subject of the forthcoming research expedition to West Africa organised by the Liverpool School of Tropical Diseases are taking an active interest in the work of the expedition. The local authorities at Sierra Leone have been instructed to afford the expedition every facility for collecting information on the subject of the propagation of malaria. On July 1st the Colonial Office wrote that "Mr. Chamberlain has learned with great satisfaction that the expedition of the Liverpool School is being sent and appreciates the energy and public spirit shown by the committee of the school in the matter." The Colonial Office has also sent for the use of the school most valuable medical, sanitary, and hospital reports of various tropical colonies, whilst the India Office has also supplied the expedition with its own medical publications and has promised to supply further issues. The committee of the school has sent an invitation to the directors of the British Museum asking them to allow Mr. E. E. Austin to accompany the expedition and offering to pay his expenses. The services of that distinguished dipterologist will be of the greatest value to the expedition, which is expected to throw an important light upon the theory held by Major Ross, I.M.S., the head of the expedition, and other distinguished workers as to the propagation of malaria by mosquitoes. The expedition will start at the end of July or the beginning of August, and will proceed directly to Sierra Leone. With the assistance of the authorities there a district which then happens to be peculiarly unhealthy will be selected and the work will be at once commenced. If the results be satisfactory and if they be speedily attained the expedition will then proceed to Accra on the Gold Coast to make investigations there. It is pleasing to note that the Belgian Government is taking an active interest in the Liverpool School of Tropical Diseases, having sent an officially appointed delegate to visit the school and to report thereon to his Government. Communications on the subject of the expedition have also been received by the committee from distinguished scientific men abroad. The funds of the school, though still far short of its requirements, are nevertheless in a flourishing condition. Mr. W. Perks, M.P., has recently sent a donation of 100 guineas.

"CRUELTY TO WOMEN."

ON July 11th the Seats for Shop Assistants (England and Ireland) Bill passed its second reading in the House of Lords by 73 votes to 28. The Bill is identical with that for Scotland which was brought in at the early part of the session and which was thrown out mainly owing to the speeches of the Prime Minister and Lord Shand. We have for years past advocated that some measures should be taken whereby shopwomen should be offered the choice of sitting down occasionally. The present Bill, as the Bishop of Winchester remarked, proposes to allow the shop assistants to sit down or stand up as they please. Certain speakers argued that the passage of the Bill would result in employers ceasing to employ women, and that thereby many women would be driven to the streets. If there is any fear of this happening let the Bill be made to apply to men assistants as well. It was also argued that legislative interference in cases of this kind was bad and that employers could safely be trusted to provide voluntarily for their assistants. No doubt some employers can be so trusted, but the matter is very different with other employers. Exactly the same arguments were used at the time of the Factory Acts and yet these Acts were passed and the trade of the country has not suffered. Voluntaryism is a very good thing in the abstract, but unfortunately it is not and never can be applied all round. Every subject has to pay rates and taxes and most of the money thus raised is expended upon matters of which some portion of the community does not approve. The Shop Assistants Bill is not merely a question of telling employers how they shall conduct their business, it is a matter of public health. The Prime Minister pointed out that there were many more pressing questions—such as ventilation, sanitary appliances, and the like. We quite agree in this, but because those reforms are still in abeyance is that a reason for shelving the present one? But even the provision of seats in no way exonerates those selfish customers who cause a shop assistant to pull down box after box and to unroll yards of material before they can make up their minds as to what they think will suit them. If such thoughtless practices were done away with the work of the assistant would be greatly lightened.

THE TEACHING UNIVERSITY FOR LONDON AND ITS NEW HOME.

TWO steps forward have lately been taken towards the formation of the Teaching University for London. A first set of statutes has been framed by the Statutory Commissioners and has been under consideration by the various bodies interested who have sent in their criticisms and suggestions to the Commissioners. The chief point affecting the medical schools is understood to be their relatively inadequate representation on the Senate if the proposals of the members of the Statutory Commission are not modified after reconsideration. A still more important matter is the settling of the official *habitat* of the University. It

is to be located in the buildings of the Imperial Institute at South Kensington. The Imperial Institute had overbuilt itself and the University has come to the rescue of what has proved practically to be on its original lines an impossible undertaking. The Imperial Institute, however, is not to be the future landlord of the University, for an arrangement has been arrived at after many negotiations, by which the Government takes over all the buildings and will provide accommodation therein for the examinations and official work of the University. A more central institution would have been in every way preferable, but the difficulties of obtaining a suitable site and of getting a sufficient sum of money must be fully recognised. It is estimated that the University will obtain five times as much space for its work as that which is now available at Burlington Gardens. It is rumoured that an attempt is being made to concentrate the scientific teaching of the medical student at South Kensington. Such a proposal would of course be most strenuously opposed by University College and King's College and the medical schools which have already expended large sums of money on the provision of teachers and fully-equipped laboratories. Competition amongst such teachers and schools which should be encouraged would at once be destroyed by a centralised school of science under State patronage at South Kensington. The existing examination in preliminary sciences at the University of London is not such a conspicuous success as to warrant the exercise by the scientific specialists of an absolute control over the scientific education of the medical student under a new *régime*.

MR. R. T. GLAZEBROOK, Principal of University College, Liverpool, has been appointed, we understand, Director of the National Physical Laboratory; but as the buildings of this much-needed institute are not yet up and the schemes for its organisation and endowment not finally passed, Liverpool ought for some little time to enjoy the advantage—no slight one—of Principal Glazebrook's services.

THE first of a series of clinical lectures at the Medical Graduates' College and Polyclinic was delivered by Professor Clifford Allbutt, M.D. Cantab., F.R.S., on July 7th before a large audience. The subject was "Some Cases of Parkinson's Disease and of Cerebral Syphilis," and the lecture was well illustrated by a number of cases.

KING'S COLLEGE HOSPITAL has been completely closed in order that the wards may be re-floored. This will take some considerable time and the hospital is not likely to be re-opened until the end of September.

THE first place in the Bass competition at Bisley has been won by Mr. J. C. Sellars, L.R.C.P. Irel., &c., of Dundalk, with a score of 135 points.

THE Cancer Fund of the Middlesex Hospital has benefited by a donation of £1050 from Mrs. Frederick Sassoon.

THE UNIVERSITY OF WALES.—491 candidates are entered for the matriculation of the Welsh University, being 61 more than last year. The Prince of Wales, Chancellor of the University, has written to congratulate the executive officers upon the steady progress which the University is making.

THE FOOD AND DRUGS ACT AT CARDIFF.—At the Cardiff Police-court on July 4th a man was summoned for giving a false warranty. Evidence showed that the defendant purchased margarine from a wholesale firm and then retailed it as butter to small shopkeepers, at the same time giving them a warranty that it was pure. The stipendiary magistrate inflicted a penalty of £20 and costs or three months' imprisonment.

QUACKS AND ABORTION:

A CRITICAL AND ANALYTICAL INQUIRY.

XII.[1]

WE append a list of newspapers other than those we have already named which are still publishing advertisements connected with the trade we have so fully discussed in these articles. Where the advertisements are of firms with which we have dealt in detail we append the name of the advertiser. A paper to which we draw special attention is the *Rock* which occurs in the list below. The connexion between a religious newspaper and the wares of E. T. Towle is not easy to see, but we hope that even if the advertisement is for the temporal profit of the newspaper and the pill-vendor it will be discontinued. Two or three months ago the *Rock* was inserting the advertisement of "Dr." Davis, but this seems now to be rejected. We observe also that one paper admits the advertisement of Blanchard's wares with the additional words "not for illegalities." It would be interesting to know how the limitation is to be enforced.

LIST OF PAPERS.

Atherston Observer (Blanchard, Towle).
Ayrshire Post (Towle).
Barnet Press (Towle).
Bedworth Observer (Towle).
Belfast News Letter (St. Clair).
Belfast Weekly Telegraph (Blanchard).
Beverley Independent (Towle).
Beverley Guardian (Towle).
Bootle Times (Davis).
Brewood Courier (Towle).
Cannock Chase Courier (Towle).
Cheadle Herald (Blanchard).
Deal News (Towle).
Easingwold Advertiser (Towle).
Eastwood Advertiser (Dasmail, St. Clair, Blanchard).
Edmonton Weekly Guardian (St. Clair).
Halifax Guardian (Blanchard).
Halifax Courier (Blanchard, St. Clair).
Hampstead Express (Towle).
Leinster Reporter (St. Clair, Towle).
Malvern News (St. Clair).
Mexborough Times (Martin, Blanchard).
Midland Herald.
Normanton Herald (St. Clair, Martin).
North London Echo (Davis, Towle).
North Middlesex Chronicle (Towle, Davis).
Nuneaton Observer (Blanchard).
Pontefract Express (Davis, Blanchard, Dasmail).
Retford News (Dasmail, Blanchard, Towle).
Rock (Towle).
Rugby Times (Towle).
Shipley Times (Towle, Blanchard, St. Clair).
South Wales Times (Martin).
Southport Guardian (Towle).
Stockton Herald (Blanchard).
Todmorden Advertiser (Dasmail).
Todmorden News (Dasmail).
Torquay Times (Towle).
Wakefield Free Press (Blanchard, Towle).
Wakefield Herald (St. Clair).
Warwick Advertiser (Davis, Towle).
Warwick Times (St. Clair, Blanchard).
Whitby Times (Towle).
Wigan Examiner (Davis).
Wiltshire Chronicle (Blanchard).
Worcester Chronicle (Blanchard).

We should explain that the above list was compiled two months ago and then included 104 papers. We decided however, not to publish the list at the time but to wait and see which papers persisted in evil-doing and which would take steps to cleanse their advertisement columns. In the interval we gave the same publicity to the wares of Madame Frain, Dasmail, St. Clair, and Towle that had previously been extended to Ottey, Davis, and the rest, for we observed that while the advertisements of the persons who had been pilloried appeared with much less frequency, those of the persons whose goods we did not analyse and discuss during the early stages of this inquiry obviously found it easy to obtain insertion. During the last week or two, however, 58 papers have apparently decided not to be mediums for the sale of these wares, and the advertisements which we now miss from their columns are almost entirely those of Frain, Dasmail, St. Clair, and Towle.

It will be remembered that a copy of THE LANCET in which any newspaper is mentioned as above is forwarded to the office of that paper, so that no journal can claim to publish these advertisements in ignorance when once its name has appeared in our columns, while we have more than once called attention to the case of Owen *v.* Greenberg and other cases, which show that no contract to insert advertisements of this kind can be enforced against any newspaper proprietor who has undertaken to insert them in ignorance of their true nature, or, indeed, whether ignorant or not.

We may for the present discontinue our lists of the newspapers which still contain these advertisements, but we shall endeavour from time to time to inform ourselves, and if necessary our readers, of any marked revival in the trade and of its methods of obtaining publicity, and shall certainly

[1] Articles I., II., III., IV., V., VI., VII., VIII., IX., X., and XI. were published in THE LANCET of Dec. 10th, 17th, 24th, and 31st, 1898, and Jan. 21st, Feb. 4th, March 11th and 25th, April 1st, June 24th, and July 8th, 1899.

not allow the matter to drop out of sight. We shall do this believing, as we did when we commenced our series of articles, that the matter to which we called attention was one of interest to the medical profession and also of great public importance; and we are happy to think that we have been largely instrumental in diminishing or exterminating a fraudulent and wicked commerce carried on at the expense, and to the danger, of a large class of the community which is as a rule unable for obvious reasons to protect itself.

THE PREVENTION OF TUBERCULOSIS.

(Continued from p. 1388, vol. i., 1899.)

MANCHESTER.

DR. NIVEN, the medical officer of health of the city of Manchester, has drawn up a very elaborate report upon the prevention of tuberculosis which has been received and approved by the Sanitary Committee. The most important feature of the report is the recommendation of a voluntary system of notification of phthisis and this was approved by the Sanitary Committee although another recommendation to apply to the Local Government Board to include phthisis as a notifiable disease under the local Act was not approved. Dr. Niven's report commences by an account of the etiology of phthisis and then proceeds to give an account of the various methods of infections—by dried sputum, by dust containing other discharges, by milk, and by meat. It is pointed out that infection must be of a certain intensity and must fall upon a suitable soil. Overcrowding, though not a chief factor in the spread of tuberculosis *per se*, is a most potent one when combined, as it so often is, with dirt. Thus cleanliness and disinfection must go hand in hand. Some means should be taken for supplying those affected with phthisis with a pocket spittoon or equivalent article and they should be carefully instructed how to use it. Dr. Niven then gives statistics showing that the alleged comparative immunity of rural districts from phthisis does not exist, but that undoubtedly the intensity of the mortality is dependent upon the crowding of the population together modified by other insanitary conditions, especially want of cleanliness. Thus the death-rate among persons dying in the workhouse who came from 73 common lodging-houses in the district of St. George's was for the three years from 1893 to 1895 at the rate of over 20 per 1000. Dr. Niven then considers the various measures which may be taken. "We may proceed," he says, "first, by educating the public generally in the precautions which they ought to take in presence of tuberculous disease. Secondly, by educating those who are already attacked by tuberculosis in taking the precautions necessary to protect their fellows. Such a process of education will imply that we have a fairly good knowledge of who the individuals are. The cleansing and disinfection of houses, &c., is evidently an integral part of the struggle and we require some form of notification if we are to carry out these objects. Thirdly, we may provide isolation hospitals at the public expense and in this way remove many of the infective units in the community. This is a necessary part of any proposal to cope effectively with the disease..... Fourthly, adequate measures are required to prevent the importation of tuberculous milk into the city. This matter you are otherwise considering, and it need not come under your attention at present. Fifthly, no effort should be spared to improve the houses of the poor and to prevent dirt and overcrowding." It will be seen that the second recommendation practically implies the necessity for some system of notification. In Dr. Niven's words: "If, however, we are to do much good in the way of prevention we must, in the opinion of your medical officer of health, have notification of the disease." Dr. Niven points out that a system of voluntary notification of phthisis has for some time past been in force in New York and has of late been made compulsory under "what appear to be somewhat disabling conditions." In Dr. Niven's opinion notification should be made compulsory, although of course the system would want very tactful working. An average fee of 2*s.* 6*d.* for each case is suggested. Dr. Niven offers the following provisional scheme towards an understanding with medical practitioners. "In all cases reported by a private practitioner your inspector to call at the house and make a record of the circumstances requiring to be noted on the form of the medical officer of health and to give general instructions as to the sanitation of the house, but not to give directions as regards the personal habits of the patient unless authorised to do so by the medical attendant. He would, however, be at liberty to leave a general paper of instructions as regards preventive measures. No visit to be paid to the house in those cases in which the medical attendant expresses a decided objection, provided he is willing himself to fill in the office form, to give all necessary instructions, and to take charge of disinfection, to be carried out in the manner usually employed by the Health Department."

As will be seen by our Manchester Correspondent's letter in another column, the report was adopted by the City Council at their meeting held on July 5th.

BOROUGHBRIDGE.

On July 1st Professor Sims Woodhead addressed the members of the Boroughbridge Agricultural Society upon the subject of Tuberculosis in Relation to Cattle Breeding and Dairy Farming. The Chairman, Major Dent, in proposing the toast "Success to the Society," coupled with the name of Professor Woodhead, said that there was no doubt that tuberculosis was a preventable disease and that if it could be stamped out both among the people and among the herds incalculable benefit would be conferred upon the country. Professor Woodhead said that the chairman had struck the keynote of the matter in referring to the preventability of tuberculosis. That disease must be looked at from a health point of view and from an economic point of view. It was a great loss to attempt to feed beyond a certain point animals which were diseased, and if they had unhealthy cattle for breeding they would get unhealthy progeny. Professor Woodhead then gave an account of the bacillus of tubercle and described its mode of growth. Light, fresh air, and healthy conditions of body were inimical to it. Tuberculosis was not hereditary but infectious and a cow with tubercle of the lungs only never gave birth to a tuberculous calf. Tuberculous cattle might be bred from if certain conditions were observed. Thus a calf from a tuberculous cow should be taken away from its mother directly after birth and should never be allowed to come in contact with her again. Although such a calf might have weakly tissues and offer fertile ground for the growth of the bacillus, still, unless born of a cow with tuberculosis of the uterus, when it might be infected before birth, it would not be tuberculous unless it was infected by the bacillus after birth. So the proper thing to do was to keep the bacillus away. Tuberculosis was, however, spread in other ways than by milk and a very frequent cause of its spread was spitting. Thus human beings conveyed the disease to cattle and other animals and the animals in their turn conveyed it to man. A single tuberculous animal in a herd was a centre of infection. If an animal was very badly infected it should be killed at once. All byres and cowsheds should be kept well ventilated and if necessary they should be artificially warmed. To obtain warmth by bad ventilation was no real economy. As to the recognition of the disease the use of tuberculin afforded an invaluable test. A brief discussion followed and after Professor Woodhead had answered various questions the proceedings terminated.

KENSINGTON.

On March 22nd the vestry of Kensington adopted the following recommendations of a sub-committee previously appointed to consider the matter:—

That the vestry do adopt means for the prevention and the cure of consumption and tuberculous disease generally, e.g.:—

1. By spreading information as to the nature and cause, the preventability and curability of tuberculosis, and especially of consumption; and by inculcating the necessity of thorough cooking of meat and the boiling of milk.

2. By disinfection of houses after the occurrence of fatal cases of consumption and after removal of consumptives to new abodes.

The matter was referred to the medical officer of health so as to ascertain his views on the best method of taking action. He suggested the sending out of a leaflet based upon one published by the National Association for the Prevention of Consumption, such leaflet to be distributed to medical practitioners, nurses, the clergy and district visitors, heads of schools, philanthropic societies, and "others likely to have some influence in spreading information." With regard to recommendation (2) Dr. Dudfield urges a system of voluntary notification and estimates that disinfection would have to be performed in from 200 to 300 cases yearly. He

hints also that in the majority of such cases the expenses will have to be borne by some one other than the heads of the bereaved families. The cost would probably be £1 per case. The circular the distribution of which was agreed to at the meeting of the vestry held on June 14th gives a short account of the etiology of phthisis, the circumstances under which the bacillus tuberculosis flourishes best, and the various means by which infection is spread. It then gives plain directions for certain precautions to be observed by "consumptives" themselves and general directions for cleansing rooms and the like and for destroying infection in milk and meat. If the assistance of the vestry is required to disinfect rooms, clothing, bedding, &c., application must be made to the medical officer of health at the town hall. In suitable cases this will be performed free of all cost.

THE WEST OF ENGLAND.

Under the presidency of the Lord Mayor of Bristol an important meeting was held at the Victoria Rooms, Clifton, on July 6th, to inaugurate a branch for Gloucestershire, Somerset, and Wilts, of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis. Among those present were Sir Herbert Maxwell, M.P., the Mayors of Cheltenham, Bridgwater, and Gloucester, the Bishop of Clifton, the Dean of Bristol, Canon Quirk, Dr. Campbell, Dr. Long Fox, Professor Michell Clarke, Dr. Shingleton Smith, Dr. Markham Skerritt, Dr. D. S. Davies, Dr. Theodore Williams, Dr. Lionel Weatherly, Dr. Harrison, and others. The Lord Mayor gave an account of the inception of the movement and pointed out how consumption was now generally recognised to be a preventable and curable disease. It was hoped to inaugurate a strong branch of the National Association for the Prevention of Consumption, and it was thought that the three counties of Somerset, Gloucester, and Wilts should join in union. They would be asked that day to discuss the question of providing a sanatorium. One had already been established on the Mendips by private influence, but that was for the well-to-do, and what was necessary now was one for the poor and needy. Devon and Cornwall had already formed a branch of the Association, and it was probable that these counties would join them. West Wilts would join in erecting a sanatorium, so that it seemed probable that they might depend upon a great effort being made by the whole of the West of England.

Sir HERBERT MAXWELL said that they must educate people and above all disabuse agriculturists of the idea that the use of tuberculin for diagnostic purposes would be followed by a wholesale and compulsory destruction of cattle. This was by no means the case.

Dr. DAVIES, the Medical Officer of Health of Bristol, showed how tuberculosis could be combated with success. Well directed treatment by sanatoria was of immense value. As to milk and meat he was hopeful that a way would be found to eliminate tuberculous cattle from herds with a due regard to the interests not only of the public but also of the farmers.

Dr. THEODORE WILLIAMS moved the resolution proposing the formation of the branch for the three counties. Sanatoria for the poor were most important. Dr. LONG FOX seconded the resolution which was carried unanimously. Dr. LIONEL WEATHERLY then proposed that a sanatorium should be erected for the poor of the three counties. After giving a description of the kind of building required and the best situation for it he said that such a building for 60 patients would cost about £15,000, and that they could treat 240 patients per annum. Canon QUIRK seconded this resolution and it was carried. The usual votes of thanks were passed and the meeting separated.

PUBLIC VACCINATORS AND GENERAL PRACTITIONERS.

THE following memorandum on the relations of public vaccinators to private practitioners under the Vaccination Act, 1898, has been issued by the Bradford and West Riding Medical Union:—

Among the many unsatisfactory provisions of the above Act there is one which is calculated to seriously prejudice the interests of private practitioners and to disturb the harmonious relations between them and public vaccinators so essential to the successful working of the Act—viz., the duty imposed on the public vaccinator under § 1, sub-sections (2) and (3), under certain circumstances to visit the homes of unvaccinated children with reference to their being vaccinated. When it is borne in mind that all public vaccinators are also private medical practitioners, it is obvious that such visitation of persons, many of whom are the patients of other medical men, is calculated to create situations in which the greatest tact and delicacy alone can prevent friction.

The Bradford and West Riding Medical Union has had three discussions on the working of the above Act, at all of which there were present public vaccinators of Bradford and the surrounding district, as well as practitioners who were not such. During the course of the discussion it was made only too evident that the necessary tact and discretion had not always been shown by public vaccinators. A great many complaints were made of public vaccinators endeavouring to induce parents who had arranged for vaccination by their family doctor to accept the services of the public vaccinator by undignified laudation of their special brand of vaccine "with the Government guarantee of purity," also by speaking of the folly of spending money on vaccination which could be done gratuitously and with the attendant advantage of free medical attendance if the operation should lead to any bad results. Complaints were also made of public vaccinators calling at houses for the purpose of vaccination before the expiration of 24 hours after due notice had been given, &c. At the last meeting of the above medical union (held on the 18th May, 1899), at which eight public vaccinators were present, it was resolved, after a prolonged discussion, to issue a memorandum drawing attention to the serious difficulties created by the Act, and to set forth the principles which should govern public vaccinators in the performance of their delicate duties when officially visiting the patients of other practitioners.

The following suggestions are offered by the Bradford and West Riding Medical Union for the guidance of public vaccinators in their dealings with the patients of other practitioners:—

1. The public vaccinator before entering a house should ascertain whether there is in fact, as reported to him, an unvaccinated child in the house.
2. In the event of his being informed that there is not an unvaccinated child in the house, or, if there is, that arrangements have been made for its private vaccination, the public vaccinator should then at once retire.
3. Should the public vaccinator be informed that the child is too ill to be vaccinated, he should retire without entering the house. It is not his duty to require a certificate of unfitness to be supplied, that is the duty of the vaccination officer.
4. It is not the duty of the public vaccinator, nor is it compatible with the dignity of his profession, to endeavour to persuade the parents to let him perform the vaccination for which he is to receive a specified fee from the public funds.
5. The public vaccinator as such should not proceed to examine any child as to its state of health unless he has been requested to vaccinate it and unless he is *bonâ fide* under the impression that the child is fit to be vaccinated. In any other case his duty is to abstain from all interference with the child.
6. Any reference as to the superiority of his methods or his vaccine, made with the view of being allowed to vaccinate, would be most unworthy and could only be exceeded in this respect by any attempt to decry the methods or the vaccine employed by other practitioners.
7. If he is required to vaccinate a child belonging to a family who are the patients of another practitioner, he is in honour and in self-respect bound to avoid any act or word which might tend to prejudice the professional interests of the family medical attendant or which could be regarded as an attempt to induce the family to employ him as their family doctor.
8. The public vaccinator is not authorised to call, for the purpose of vaccinating a child, until after the expiration of the 24 hours' notice which he is required to give.

We agree with the Bradford and West Riding Medical Union in thinking that if these suggestions are adhered to the interests of both the public and the general practitioner will be safeguarded without interference with the official duties of the public vaccinator.

LONG v. STOCKER.

ALLEGED NEGLIGENT TREATMENT BY A MEDICAL MAN: VERDICT FOR THE DEFENDANT.

IN this action which was tried before Mr. Deputy Judge Lloyd and a jury at the Marylebone County Court on June 26th, the plaintiff, Mrs. Catherine Long, a laundress of Kilburn-park-road, sued the defendant, Mr. Walter Woodley Stocker, for damages, alleging that she had sustained permanent injuries to three fingers of her left hand by reason of the negligence and unskilful treatment of the defendant. According to the evidence, on August 29th, 1898, plaintiff, whilst engaged in her work at the Bay House Laundry, Willesden, had the misfortune to get her left hand squeezed in a rubber wringer. She immediately after the accident consulted the defendant who examined the hand and found no marks of bruising or crushing but only a slight swelling on the metatarso-phalangeal joints. The defendant applied a spirit lotion to the hand and then bandaged it.

On the following day the plaintiff again saw the defendant when the pain and swelling were better and the defendant advised her to continue to use the lotion and also the bandage until the acute inflammation which was then present had subsided. On the 31st the defendant went away for his holidays and did not see the plaintiff again or hear from her until he received a letter from her solicitor on Feb. 23rd, 1899. The plaintiff did not call at the defendant's house for some days after August 30th, 1898, when she saw Dr. Bardsley, who was acting as locum tenens for the defendant. Dr. Bardsley continued the course of treatment adopted by the defendant, made a very careful examination of the hand and tested the fingers, with the result that he found that she was going on satisfactorily. The plaintiff saw Dr. Bardsley in all three times. She then discontinued consulting him and went to some other practitioners and on the advice of one of the latter she went to St. Mary's Hospital. The whole case turned upon the question whether the defendant ought to have applied a splint to the plaintiff's hand.

The plaintiff gave evidence bearing out the facts and called two of the medical men who had treated her for the injuries, the one on Sept. 13th and the other on Feb. 16th, 1899. They both agreed with the defendant's treatment, but thought that in addition a splint should have been applied. In cross-examination, however, they admitted that possibly a splint would not be necessary for six or seven days after such an accident as the plaintiff's.

The defendant also gave evidence and called Mr. H. W. Page of Harley-street and Dr. Bardsley, both of whom absolutely agreed with the defendant's treatment.

The jury retired to consider their verdict and found in favour of the defendant, expressing their sympathy for the plaintiff. The judge accordingly gave judgment for the defendant with costs. Mr. Oliver appeared as counsel for the plaintiff and Mr. Henry Warburton, instructed on behalf of the London and Counties Medical Protection Society, Limited, for the defendant.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: ELECTION OF PRESIDENT.

MEETING OF FELLOWS.

A MEETING of the Fellows of the College was summoned for July 6th, at 5 P.M., after the Council election, but at the appointed time only a few Fellows were present. The President, Sir WILLIAM MAC CORMAC, Bart., K.C.V.O., was in the chair, supported by the two Vice-Presidents, Mr. PICKERING PICK and Mr. HOWARD MARSH. The number of Fellows slowly increased, but by a quarter past five only 21 were present, including the members of the Council. The SECRETARY informed the President of this fact and the PRESIDENT then rose and said that he much regretted that no meeting could be held as a quorum was not present and he regretted this the more as on two previous occasions meetings of Fellows could not be held on account of a similar paucity of numbers. He went on to say that the agenda paper contained only the confirmation of the minutes of the last meeting, and therefore it might be thought that the failure to obtain a quorum was of no importance, but the Council would have liked to have had the benefit of the opinion of the Fellows on the question of obtaining the proposed new Charter. After the failure to obtain a meeting of the Fellows in January, 1898, the Council had decided that two meetings a year were one too many, and they had therefore altered the regulations so that only one meeting of Fellows should be held in each year and it was possible that after this third failure to obtain a quorum for a meeting of Fellows the Council might think that even one meeting a year was unnecessary. Under the circumstances he could only declare that in the absence of a quorum of 30 Fellows no meeting could be held.

Sir ROBERT CRAVEN asked permission to make an informal suggestion to the Council: he would advise that the number required for a quorum should be reduced to 20, or even to 15.

The PRESIDENT, in reply, expressed his doubt whether 15 would be a satisfactory number, as there were more than 1100 Fellows.

ADDITIONS TO THE MUSEUM.

For many years it has been the custom to exhibit on the day of the election to the Council all the specimens which have been added to the Museum during the preceding year, and they are examined with much interest by the Fellows who attend to vote in person, but unfortunately the number of personal voters is falling off every year and on the present occasion only 16 Fellows voted personally, so that the specimens hardly received that amount of attention which their interest and their importance deserve.

Among the pathological additions may be mentioned the following:—The humerus of an infant affected with highly pronounced congenital rickets; an internal saphenous vein, showing shrinking, in a patient who was bedridden for many years; the cervical portion of a spinal column which was much crushed several years before death and yet no permanent nervous symptoms at any time appeared; tuberculosis of the udder in a cow, from the Royal Veterinary College, and portions of the spleen and liver of a calf affected with congenital tuberculosis. The surgical treatment of hypertrophied prostate by castration or by vasotomy has attracted so much notice in the last few years that two specimens presented by Mr. J. R. Lunn showing the partial atrophy following these operations are necessarily of great interest; in each case we are told that the improvement in micturition was well marked. A very well-marked case of true elephantiasis of the foot was shown and the vertical section demonstrated the overgrowth of all the tissues. Mr. Alfred Coleman has presented a large series of plaster casts showing abnormal conditions and irregularities of the teeth.

Three cases of bacteriological cultures were shown: they comprised cultures (rendered permanent by means of formalin vapour) of the micro-organisms of plague, influenza, glanders, diphtheria, cholera, and many others. Above the cultures was a complete set of coloured drawings showing the microscopic characters of the bacteria themselves.

A valuable addition has been made to the series of drawings; this consists of a large number of water-colour drawings illustrating diseases of the rectum and anus which were made by the late Mr. Peter Y. Gowlland and which were presented to the College by Mr. Bryant.

In the department of human and comparative anatomy more than 200 additions have been made. The vertebral ossicles of ophicoma, a species of starfish, are very complex in structure and enlarged models of them have been made from drawings taken in three positions under the microscope to serve as guides to carving them in plaster.

Two exquisite dissections displayed extremely clearly the nerve-supply by the seventh and tenth cranial nerves to the mucous canals and the lateral line sense organs in a skate; the latter organs are probably connected with the idea of position.

The additions to the physiological series are very numerous and are connected chiefly with joints and muscles. One striking dissection shows the human lower jaw from behind, with the submaxillary and sublingual glands; the anterior bellies of the digastric muscles are united to each other and to the mylohyoid in the mid line. The whole exhibit reflects the greatest credit on the Curator, Professor Stewart, and his assistants.

ELECTION OF PRESIDENT.

A quarterly meeting of the Council was held on Thursday, July 13th, the President, Sir William Mac Cormac being in the chair. The election of President took place at the close of business and resulted in the re-election of Sir William Mac Cormac. Mr. H. G. Howse and Mr. John Tweedy were appointed vice-presidents.

THE INTERNATIONAL CONGRESS UPON TUBERCULOSIS.

THE report of Sir Herbert Maxwell and Dr. Pye-Smith, the delegates of Her Majesty's Government at the recent Congress at Berlin, was issued yesterday (Thursday) as a Parliamentary paper. The joint report is a purely formal statement as to the conduct of the proceedings and the courtesy extended to the British delegates, but to this is appended a memorandum by Dr. Pye-Smith in which he testifies to the practical character of the papers read and summarises the main conclusions.

Of these conclusions the most important were as stated by Dr. Pye-Smith in untechnical language:—

1. That consumption and all other tuberculous diseases are caused by the presence and multiplication of the specific bacillus discovered by

Professor Koch of Berlin; although other microscopical plants of allied though distinct character are often present in addition to the constant and essential bacillus tuberculosis and produce modifying and generally injurious effects.

2. That the most frequent and dangerous mode of infection by the specific bacillus in adults is by its admission to the lungs and throat.

3. That the vehicle by which the bacillus is transmitted from a sick to a healthy adult is, in the great majority of cases, the phlegm coughed up.

4. That another important vehicle of infection is milk, either occasionally by accidental defilement with moist sputum from a consumptive patient, or frequently by young children drinking the milk of cows affected with tuberculous disease of the udder.

5. That a third, though far less frequent mode of tuberculous infection is by eating meat—i.e., muscle and fat—which is contaminated from tuberculous disease of the lymph-glands and other parts, and has been imperfectly cooked.

6. That, while it is now proved that the specific bacillus is present in every case of tuberculous disease, yet there is no doubt that of the two conditions which always make up a disease (the external disturbance and the internal result of that disturbance), the latter depends on the condition of the host as much as upon the activity of the infecting parasite.

7. That infective tuberculosis in general and phthisis or pulmonary tuberculosis in particular, is not "catching" in the popular sense of the word. The disease is not conveyed by the breath, nor even by coughing, except as a rare exception, nor is it caught by contact with a consumptive patient.

For these reasons, says Dr. Pye-Smith, we cannot throw away the experience showing that apart from household infection consumption appears in certain families more frequently than chance can account for. Hence the importance of strengthening the body against the invasion of tuberculosis by wholesome and particularly by fattening food, by increase of the colour and corpuscular richness of the blood, by improved digestion, and by exposure to open air and light. Hence the importance of the general hygienic measures in which this country took the lead from the latter half of the present century. The result has been the diminution of the number of deaths by consumption in England and Wales by one half, in proportion to the population, during the 45 years from 1851 to 1895.

The following practical points in the prevention of tuberculosis as a widespread and destructive disease were, says Dr. Pye-Smith, inculcated by various speakers at the Congress:—

A.—The primary importance of free ventilation and wholesome and abundant food. Improvement in the dwellings and the food of the poorer classes in this country and their increasing cleanliness and sobriety have not only diminished sickness generally, but directly reduced the number of deaths from consumption until the mortality from this cause is less in London than in any other large city.

B.—The prevention of infection of the lungs by the bacillus of tubercle depends chiefly on rational treatment of the sputa of consumptive patients, or rather, for practical purposes, of the sputa of all those affected with cough and expectoration. The phlegm should never be deposited on the ground or on a handkerchief where it can dry up; it should be kept moist until it can be destroyed by heat and the vessel used to receive it should contain phenol or some other antiseptic solution.

C.—The prevention of infection by tuberculous milk may be accomplished either by boiling all milk given as food to children, or by inspection of dairies, so as to prevent tuberculous milch-cows being used.

D.—The prevention of infection by meat can be secured by careful and thorough inspection of carcasses or by diagnostic testing of cattle with tuberculin. This, the only undoubtedly useful application of the so-called tuberculin, has the drawback that after the effect of the inoculation has passed off a tuberculous animal becomes immune to it for a time, and so may be passed as healthy.

The following facts may, however, says Dr. Pye-Smith, be stated as important for the people as well as their governors to be aware of:—

(*a*) That tuberculous disease of the bones and joints of the glands and skin and abdomen, though dangerous, is not incurable and by the modern methods of operative medicine is in most cases successfully cured.

(*b*) That tuberculosis of the lungs (phthisis or consumption) is frequently cured and probably more often now than formerly.

(*c*) That there is no specific drug which has direct influence upon consumption, but that many, both old and new, have valuable effects upon its complications.

(*d*) That abundant food, particularly of a fatty nature, and a life in the open air, are no less valuable in the treatment than in the prevention of phthisis and that the hospitals and asylums for providing these essentials, which are now numerous in Germany, and far from rare in England, Austria and Hungary, France, and the United States, are of essential value.

Dr. Pye-Smith's interesting memorandum closes hopefully with the following words: "The prospect of improved success in the treatment of tuberculosis in general, and of consumption in particular, by the advance of pathology and the progress of surgery and medicine is a hopeful one, almost as hopeful as that of limiting the spread of the disease by preventive measures.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following were among the principal amounts received at the Mansion House during the past week in aid of this Fund.

	£	s.	d.
Parish of St. Peter, Eaton-square:—St. Peter's Church, £1000 9s. 6d.; St. Peter's Chapel, £5 2s. 6d.; St. John, Wilton-road, £70 10s. 6d....	1076	2	6
Rosslyn-hill Unitarian Church, Hampstead	123	14	5
St. Peter, Cranley-gardens	471	4	0
Holy Trinity, Sloane-street	263	16	9
St. Peter, Eltham-road	36	10	0
St. Margaret, Lee	41	19	3
St. Stephen, Wandsworth	71	17	10
Christ Church, Forest-hill	61	18	6
St. John the Divine, Kennington	62	11	7
L. G.	20	0	0
West London Wesleyan Mission	38	16	10
Aldenham Parish Church (with additions)	103	0	0
All Saints, Blackheath	50	0	0
West London Synagogue, Upper Berkeley-street	228	12	6
St. John, Paddington	137	8	4
Christ Church, Streatham-hill	100	0	6
St. Columba, Pont-street	143	14	0
St. John's Presbyterian Church, Forest-hill	102	2	6
Chapel Royal, St. James's	57	0	5
St. Luke, Westbourne-park	50	1	3
St. Matthew, Upper Clapton, and Holy Trinity, Lea Bridge	44	10	3
St. George, Perry-hill	37	14	10
St. Matthew, Ealing-common	27	11	4
Upper Tooting Wesleyan Church	20	0	0
St. Peter, Ealing	23	18	7
North Finchley Congregational Church	23	1	6
All Saints, Woodford Wells	24	0	0
All Saints, Putney	27	10	0
All Saints, Upper Norwood	20	0	0
St. Mark, Regent's-park	23	3	4
South Kensington Presbyterian Church	27	4	1
St. Peter, Hersham	22	9	10
Dr. Ludwig Mond, F.R.S.	50	0	0
St. Peter, Bayswater	148	8	1
St. Luke, Battersea	42	14	2
Holy Trinity, Anerley	26	14	7

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6495 births and 3496 deaths were registered during the week ending July 8th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 16·5 to 15·7 per 1000, rose again last week to 16·0. In London the rate was 15·0 per 1000, while it averaged 16·6 in the 32 provincial towns. The lowest rates in these towns were 10·6 in Croydon, 10·8 in West Ham, 11·8 in Portsmouth, and 12·1 in Bradford and in Swansea; the highest rates were 19·4 in Salford, 21·5 in Sheffield, 24·2 in Liverpool, and 24·8 in Manchester. The 3496 deaths included 468 which were referred to the principal zymotic diseases, against 411 and 407 in the two preceding weeks; of these, 133 resulted from measles, 98 from diarrhœa, 86 from whooping-cough, 81 from diphtheria, 35 from scarlet fever, 24 from "fever" (principally enteric), and six from small-pox. No death from any of these diseases was recorded last week in Brighton or in Derby; in the other towns they caused the lowest death-rates in Plymouth, Bristol, Norwich, and Newcastle-upon-Tyne, and the highest rates in Liverpool, Manchester, Burnley, and Sheffield. The greatest mortality from measles occurred in Sheffield, Liverpool, Portsmouth, Burnley, Salford, and Manchester; from scarlet fever in Halifax and Burnley; and from whooping-cough in Portsmouth, Blackburn, and Burnley. The mortality from "fever" showed no marked excess in any of the large towns. The 81 deaths from diphtheria included 31 in London, seven in Leicester, seven in Leeds, seven in Sheffield, six in Liverpool, five in West Ham, three in Swansea, and three in Birmingham. Six deaths from small-pox were registered in Hull, but not one in any other of the 33 large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals at the end of last week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, July 8th, was 2526, against numbers increasing from 2161 to 2430 at the end of the seven preceding weeks; 315 new cases were admitted during the week, against 262, 335, and 302 in the three preceding weeks. Influenza was certified as the primary cause of 11

deaths in London. The deaths referred to diseases of the respiratory organs in London, which had been 190 and 159 in the two preceding weeks, rose again last week to 194, and were 11 above the corrected average. The causes of 41, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Manchester, Bradford, Leeds, and in 15 other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Leicester, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·7 and 17·7 per 1000 in the two preceding weeks, declined again to 16·9 during the week ending July 8th, but was 0·9 per 1000 above the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 5·1 in Perth and 12·8 in Greenock to 18·1 in Glasgow and 19·1 in Dundee. The 515 deaths in these towns included 24 which were referred to measles, 24 to diarrhœa, eight to whooping-cough, six to scarlet fever, three to "fever," and one to diphtheria. In all, 66 deaths resulted from these principal zymotic diseases, against 62 and 66 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2·2 per 1000, which slightly exceeded the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 16 and 15 in the two preceding weeks, rose again to 24 last week, of which 21 occurred in Glasgow and two in Edinburgh. The eight deaths referred to whooping-cough showed a slight further decline from recent weekly numbers and included three in Glasgow and three in Leith. The fatal cases of scarlet fever, which had been 10 and eight in the two preceding weeks, further fell to six last week, of which five occurred in Glasgow. The three deaths from "fever" corresponded with the number recorded in the preceding week, and the fatal case of diphtheria occurred in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 74 and 77 in the two preceding weeks, declined to 57 last week and were 49 below the number in the corresponding period of last year. The causes of 30, or nearly 6 per cent. of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·3 and 23·0 per 1000 in the two preceding weeks, further rose to 23·3 during the week ending July 8th. During the 13 weeks of last quarter the rate of mortality in the city averaged 26·5 per 1000, the rate during the same period being 16·6 in London and 17·8 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the preceding week and included 14 which were referred to the principal zymotic diseases, against six and 11 in the two preceding weeks; of these, five resulted from measles, four from whooping-cough, three from diarrhœa, one from diphtheria, and one from whooping-cough, but not one either from small-pox or scarlet fever. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·4 in Edinburgh. The five deaths from measles exceeded the number recorded in any week during the current year. The deaths referred to different forms of "fever," which had been three and one in the two preceding weeks, rose again to four last week. The mortality from diphtheria and from diarrhœa corresponded with that recorded in the preceding week. The 156 deaths in Dublin last week included 27 of infants under one year of age and 31 of persons aged upwards of 60 years; the deaths of infants showed a further increase, while those of elderly persons showed a further decline from recent weekly numbers. Six inquest cases and three deaths from violence were registered; and 57, or more than a third, of the deaths occurred in public institutions. The causes of seven, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE DEVON AND EXETER HOSPITAL.—T.R.H. the Duke and Duchess of York visited the Devon and Exeter Hospital, Exeter, on July 4th. Afterwards a garden party was held in the grounds and 120 little girls presented the Duchess with purses of £5 each on behalf of the hospital.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-GENERAL THOMAS MAUNSELL, C.B., is placed on retired pay. Colonel Thomas O'Farrell, R.A.M.C., to be Surgeon-General, vice T. Maunsell, C.B.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Wallis, retired pay, has been appointed to the medical charge of the 50th Regimental District, Maidstone. Colonel T. J. Gallwey, C.B., takes up the post of Principal Medical Officer in the Home District at the close of the manœuvres on Salisbury Plain. Major E. Eckersley has arrived in the Home District for duty. Captain D. D. Shanahan and Captain R. J. W. Mawhinny have embarked for Natal.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant David Smart, 2nd Volunteer Battalion the King's (Liverpool Regiment), to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the King's (Shropshire Light Infantry): Surgeon-Captain F. K. Pigott to be Surgeon-Major. 3rd Volunteer Battalion the Manchester Regiment: Surgeon-Lieutenant H. Irwin resigns his commission. 7th Middlesex (London Scottish): Surgeon-Captain J. A. Watson to be Surgeon-Major. Surgeon-Major J. A. Watson resigns his commission; also is granted the rank of Surgeon-Lieutenant-Colonel, with permission to continue to wear the uniform of the corps on his retirement.

THE PEACE CONGRESS.

The Congress at the Hague has failed to accomplish anything important. Germany is strongly opposed to any plan for reducing her armaments and refused to do so. The fact is that it would undermine and upset the whole system of conscription and organisation on which the military power of Germany is founded. While no doubt seems to be entertained as to the personal good faith and sincerity of the Czar in putting forward his proposals very grave doubts exist as to the policy of the Russian Government as a military power and it cannot be said that recent events in regard to Finland have done much to strengthen the idea that Russia is entering upon any new or more liberal policy making for peace and progress. We are still not within any measurable distance of the time when the strength of military medical services will be reduced in consequence of the reduction of armies and armaments.

THE PHILIPPINES.

The hot and rainy season has led to a period of inactivity on both sides in the Philippines, but we may expect that field operations will begin again as soon as the climatic conditions are more favourable. Our experience in Burma shows how tedious and protracted this sort of warfare is. The Americans estimated the difficulties to be overcome too lightly and their journals exaggerated the importance of most of their so-called battles, for the majority of the fights were on a very small scale and not likely to have had any serious or permanent effect. It is surprising that we hear so little of the amount or nature of the sickness among the American troops occupying the country. An attempt will probably be made later to increase largely the force at General Otis's disposal so as to crush the rebellion by energetic and sustained operations against the insurgents, for the people in the United States are getting very tired of the war.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on July 11th, Inspector-General A. Turnbull, M.D., in the chair, the sum of £65 was distributed among the several applicants.

DEATHS IN THE SERVICES.

Brigade-Surgeon John Bennett, late Bengal Medical Department, on June 28th, at Beau Désert, Jersey, aged 59 years. He entered the service in March, 1865, and was promoted Brigade-Surgeon in January, 1889.

ASSAM.

The year 1897 was a very unhealthy one in Assam, according to the Commissioner's report, but 1898 has shown some improvement. There had been a great prevalence of cholera, malarial fevers and kala azar in 1897.

The present session of the Army Medical School, Netley

will terminate on Thursday, July 27th. The results of the Netley Examination will be announced on Saturday, July 29th, when the prizes will be distributed and an address delivered by Lieutenant-General Sir George S. White, V.C., G.C.I.E., G.C.B., G.C.S.I.

Correspondence.

"Audi alteram partem."

TRACHEOTOMY IN DIPHTHERIA: THE AFTER-TREATMENT.

To the Editors of THE LANCET.

SIRS,—Dr. George Thornton's important remarks on the tracheotomy statistics of the Fountain Fever Hospital at Tooting, emphasise the fatality of the disease in spite of antitoxin, when it implicates the trachea and bronchi, and the prevailing absence of any adequate treatment for this complication. I therefore venture again to call attention to a method which is alike beneficial and harmless, and which I believe is based upon a sound therapeutical principle and one capable of further development. I refer to the systematic intra-tracheal treatment by creasoted oil.[1]

"Of the 39 *dry* cases" (Dr. Thornton describing as "dry" those cases in which "there is diphtheritic exudation in the trachea and bronchi, whilst the patients bring up little or no mucus and make a dry whistling sound on coughing") "no fewer than 20 of the patients died." It is clear then that we are in need of some more efficacious treatment than feathering and spraying the trachea, occasionally introducing a minim or two of sodium bicarbonate solution and administering antimonial wine, and that our aim should be to prevent the occurrence of obstruction and to remove it before urgent dyspnœa calls for extreme measures. If any form of treatment is of any use it should be resorted to immediately and kept up perseveringly.

When tracheotomy has been performed surgery has done its "best" and its "worst" and it rests with the physician to deal with the resulting condition. The "worst" is that by suspending the function of the glottis tracheotomy greatly reduces the power and efficacy of cough, whilst the disease itself and the carbonic acid intoxication dangerously depress the cough reflex in the worst cases. The result is that whilst there is much to cough up, cough is often almost suppressed after tracheotomy.

One of two broad clinical states presents itself immediately after the operation. Either (1) air enters freely, no râles are audible at the bases, and the chest expands fully (cases of this kind may be "let alone," as Dr. Thornton advises); or (2) there are râles, air may not enter freely, and the chest may not expand as it should, the patient's cyanosis also showing that tracheotomy has not cured the case. In *all* these cases I would strongly recommend the introduction of creasoted oil (1 in 20) through the tube after its insertion, to be repeated every two hours until all serious symptoms have subsided, in the dose of five drops for an infant, 10 for a child, and from 15 to 20 drops for an adult.

It is almost superfluous to point out that the objects aimed at and in great part secured by this method are (1) to promote cough; (2) to stimulate and to heal the mucous membrane; and (3) to soften and detach the membrane and to lubricate the air passages. Most stress, I believe, is to be laid upon the local treatment; but we are also greatly dependent upon feeding (if necessary, partly by rectum), upon careful stimulation by alcohol and upon a tonic treatment, such as that which I prescribe (the perchlorides of mercury and of iron, with strychnine and digitalis).

I venture to submit these suggestions as mere instalments towards the full measure of treatment required by the urgency of these cases, some of which cannot be saved by any treatment, and in the hope that some better suggestions may be elicited. I am, Sirs, yours faithfully,

Curzon-street, Mayfair, W., July 10th, 1899. WM. EWART.

[1] THE LANCET, 1897, vol. ii., p. 1564; also L. A. Grimes, A Case of Membranous Tracheitis, THE LANCET, 1898, vol. ii., p. 409.

REFORM IN THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—With regard to the meeting of Fellows and Members of the Royal College of Surgeons of England on July 5th may I as one of the Members present say that I feel sure that none of them have any desire to spoil the approaching centenary of the College? They simply feel that their needs are not understood by the Council of the College and desire such a representation thereon as may suffice to make them known to that body, being certain also that the College as a whole is likely to suffer if the present state of affairs continues. The present importance of the College is due apart from its wealth, to its existence before the modern universities came into being and before the Scotch and Irish Colleges and universities provided so many surgeons for England; also to its being a purely professional body not under the domination of a convocation composed largely of schoolmasters or of a City Company which examines by deputy; and, above all, to the fact that the Membership is the necessary introduction to the Fellowship the possession of which has, till recently, been a *sine quâ non* for those desirous of holding a position on the staff of the greater hospitals. This is no longer the case in the provinces where the Fellowship of the Scotch and Irish Colleges or the possession of a degree in surgery of certain universities now equally qualifies for admission to the surgical faculty of many of the important schools and hospitals. Moreover, students are following the lead of practitioners in asking what use it is to them to hold the London collegiate diplomas since they bring them neither position in the Colleges nor profit outside them.

The Members of the College do not ask for a preponderating political power, but only for such a share of representation that they may feel sure that their interests as practitioners are being duly considered and adequately protected. They do not ask to govern so much as to be governed, to be defended from the black sheep among them who cadge and tout from door to door and degrade not only themselves but their fellows. They demand that the Council shall see that each Member as well as each Fellow is required to do his best to maintain the honour and reputation of the College and all its constituents. If the College will not undertake these duties through its Council fewer and fewer men will become Members and as the monopoly of hospital appointments is broken up, as it will be, fewer Members will become Fellows and the College will cease to be the great and important corporation it now is. It must become something more than a London consultants' club if it is to continue to exist worthily. At present most Members I am acquainted with are wondering why they became so since they find that university diplomas confer more *éclat* in the eyes of the public, a fact largely due to the persistent way in which the College depreciates the qualifications it confers (the profession itself has always recognised the sterling practical value of them and most English students have taken them as a matter of course), while certain other diplomas permit of greater freedom of practice without giving the holder the feeling that he is infringing ethical codes inculcated in a half-hearted way by the Colleges and which, as things are, hinder without helping. The Members themselves are proud of the College, of its history, of its magnificent museum and library, of its lectures and laboratories, of its President and eminent Council, and of the attainments of its Fellows, and they only desire that the ties which bind them to it and its traditions may be strengthened. It is not necessary or even advisable that too many men should be led to specialise in surgery, to undertake difficult operations which they have not opportunity to perfect themselves by frequent performance in the details of; but it is not because a man has to cover a considerable area of practice that he is to be denied all interest in the field of labour the ground of which he tills, though he reaps so small a portion of the harvest of wealth and honour. The ploughman has as much right to be considered as the husbandman in the day of harvest rejoicings and rewards, the general surgeon as the consulting specialist. The Members of the College do most of the early work of diagnosis even of the obscure cases, to them fall most of the emergencies of civil and military life. When the bulk of the general surgical practitioners seek other qualfications easier

of attainment or conferring more *éclat* in the public eye then the College will cease to be what it still is, its revenues and its prestige will decline, and those who have accomplished its fall will be those who sit and listen with such an aspect of polite boredom to the voteless if not voiceless expression of the Members' discontent. Surely the granting of a new charter is the *best* occasion for a consideration of *all* claims that should find their place therein, and despite the President's pathetic appeal the blame for any dashing of his hopes must rest on those of the Council who have delayed till the eleventh hour the promulgation of the draft, doubtless in order to baulk any practical embodiment of the Members' rights therein.

I am, Sirs, yours faithfully,
WM. J. TOWNSEND BARKER, M.R.C.S. Eng., L.R.C.P., L.S.A. Lond., D.P.H. Cantab.,
Formerly Physicians' Assistant, Bristol General Hospital, and Clinical Assistant, Bristol Eye Hospital, &c.

Fulham, S.W., July 10th, 1899.

THE NOTIFICATION OF INFECTIOUS DISEASE AND UNQUALIFIED PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—I should like to have your opinion on the following which has come under my notice as chairman of the Sanitary Committee here. A medical man in this district was called in to see a case and found the patient suffering from scarlatinal nephritis and the skin peeling. He asked who had been attending the child previously and was informed that a herbalist had been seeing the child at his shop for the last two weeks. In sending a notification of the disease to the council he reported that the herbalist had the case under hand previously to himself. We have had no notification from the herbalist. According to the Notification of Infectious Diseases Act ought the herbalist to have reported the case? and can we as a sanitary authority take any action in the matter? There is nothing, I presume, to prevent herbalists from treating cases of scarlet fever if the patient or his guardian so desires it, but are we as a sanitary authority to impose a fine on registered practitioners for not notifying and allow herbalists to do the same without any interference on our part?

I remain, Sirs, yours faithfully,
E. A. CLARKE, M.R.C.S. Eng., L.S.A.

Dukinfield, June 28th, 1899.

*** There is, as our correspondent implies, no power to prevent persons from employing unqualified practitioners such as herbalists, but the law has decided that risk to public health shall not be incurred by reason of the non-notification of cases of infectious diseases in such instances. Hence it is that the Infectious Disease (Notification) Act, 1889, provided for dual notification, and in Clause 3 (1) *a* there is a definite obligation on the head of the family to send the required notice to the medical officer of health. Clearly the head of the family who fails in this duty when he avoids employing a qualified medical practitioner should be proceeded against. In the absence of such proceedings unqualified attendance would soon be sought merely to avoid notification and thus to prevent the intervention of the sanitary officers in the interests of the public health.—ED. L.

"THE ROYAL ARMY MEDICAL CORPS MANUAL."

To the Editors of THE LANCET.

SIRS,—The amount of publicity given in the medical and volunteer papers to Surgeon-Captain Sleman's suggestion seemed to imply that it was at least something original. Now it appears that all he can claim is to have suggested a method which has been practically common property for several years. Whatever credit may be attached to this by all means let him have.

I am, Sirs, yours faithfully,
VALENTINE MATTHEWS.

July 11th, 1899.

To the Editors of THE LANCET.

SIRS,—That the Volunteer Ambulance School of Instruction submitted to the authorities the scheme of lifting wounded now promulgated in the Royal Army Medical Corps Manual is no doubt true and our thanks are due to them for it, but I can bear out Mr. Valentine Matthews's statement that the method is no new one and has been for years discussed by medical officers of volunteers. It is practically the same as that adopted by the American army as far back as 1892 and must surely have been known to our medical staff. This method is so obviously the most simple and straightforward that it has been a surprise to those of us engaged in teaching stretcher drill that any other could be adopted. The late mode of lifting wounded was probably a relic of the days of petty and complicated manœuvres.

I am, Sirs, yours faithfully,
A MEDICAL OFFICER OF VOLUNTEERS.

July 11th, 1899.

"CHINOSOL IN PHTHISIS."

To the Editors of THE LANCET.

SIRS,—With reference to Dr. Macgregor's article on the chinosol treatment in pulmonary phthisis, it would be interesting to know whether in those cases which he mentioned had undergone the above treatment he had confirmed his diagnosis by a bacteriological search for the tubercle bacillus apart from physical signs and symptoms.

I am, Sirs, yours faithfully,
JOHN R. O'BRIEN.

Great Yarmouth, July 8th, 1899.

THE PATHOLOGY OF CANCER: A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—I trust you will be able to grant me a little space in your valuable journal as I wish to take the earliest opportunity of disclaiming any association with the paragraphs relating to me recently appearing in the daily papers. These paragraphs are in many respects misleading and are calculated to delude unfortunate sufferers by holding out false hopes and to bring me into discredit amongst my professional brethren. A short account of my experiments on cancer will appear in the forthcoming number of the *Journal of Pathology*, but as this premature publicity has occurred perhaps you will allow me to state briefly the real facts of the case. I have been long impressed by the following considerations—viz., that the epithelial cells of cancer were themselves the sole infective agents; that this cancer epithelium was practically normal epithelium, only out of place; and that from the very commencement of the cancer it was growing in the lymph spaces. I thought from this that if the normal epithelium by some accidental means should obtain entrance into the lymph spaces it would find no barrier to its continued growth and would produce all the phenomena of cancer. At present I have performed but a single experiment to test this view. I obtained an emulsion of the epithelial cells from the healthy ovary of a healthy rabbit and placed them in the animal's peritoneum. The animal died 14 months afterwards and on examination masses of growth were found in the abdominal and thoracic cavities having the characteristic features of typical ovarian cancer. Experiments will be carried out to confirm and extend these results and until these have been completed no general conclusions can be drawn. Apologising for the length of this communication,

I am, Sirs, yours faithfully,
H. LAMBERT LACK.

Harley-street, W., July 7th, 1899.

"THE REMOVAL OF OUTGROWTHS FROM THE NASAL SEPTUM, ETC."

To the Editors of THE LANCET.

SIRS,—To answer fully the very practical questions of "An Exile"[1] would require more of your space than, I fear, you are able to afford. Outgrowths from the nasal septum other than "spurs" are rare, and should always be removed because of a certain liability to take on malignant transformation. No unpleasant result is likely to follow provided that chemical cauterisation is employed for destruction of their base, or of any fragment remaining after use of snare or knife. The galvano-cautery is, however, to be avoided from its tendency to form scar tissue on the septum leading to "bridging." In any case it is well to employ an ivory

[1] THE LANCET, July 1st, 1899, p. 68.

shield to the external wall of the nostril and to use great care in the application of whatever caustic may be selected. The indication which I have laid down for the removal of a "spur" is whether or not it is in constant contact with the opposite inferior turbinal. It is certainly better to reduce hypertrophy of the turbinal first either by cautery or by turbinotome (Carmalt Jones's spokeshave) but occasionally when the spur is very large this should first be attacked.

As to tonsils I have employed no other instrument than the guillotine in an extensive experience of over 30 years except in the rare instances of extreme enlargement or a hæmorrhagic tendency, when a wire ecraseur is preferable. It may be useful to add that in all cases of enlarged tonsils in children under the age of 15 adenoids should be searched for and if found removed at the same sitting.

I am, Sirs, yours faithfully,

Mansfield-street, W., July 5th, 1899. LENNOX BROWNE.

NASAL DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—I should be glad of any advice from you or any of your readers on the following case in which I am much interested. A youth of 13 years is the subject of Klebs-Löffler bacillus in the nose but otherwise seems to be in excellent health. About the beginning of May this year he contracted measles at a public school. This was of a mild description and soon passed off, but a slight soreness about one nostril attracted attention and an examination of a specimen of the nasal discharge revealed Klebs-Löffler bacilli in abundance. On this account he was isolated for some weeks, but as the bacillus still remained he was removed to his home.

There was no constitutional disturbance whatever and at present he is in excellent health, although from a further bacteriological examination since he came home the bacillus remains. What I am anxious to know is how it is to be got rid of and what is its significance? If sent back to school would it be at the risk of giving other pupils a similar complaint? Why, if this is the genuine diphtheria bacillus, does it give rise to no grave symptoms or, in fact, to no constitutional symptoms at all? Anxiously awaiting any information which may throw more light on the subject,

I am, Sirs, yours faithfully,

Gosport, July 5th, 1899. BACILLUS.

*** The exact significance of cases of this nature is not at present understood. Bacilli not to be distinguished in virulence or morphologically from the Klebs-Löffler bacillus have several times been identified in the discharge of post-scarlatinal rhinitis. The organism found in this case should be submitted to further investigation with the object of placing its identity beyond doubt. Thorough irrigation of the nostrils with 1 in 2000 solution of perchloride of mercury should be carried out every few hours and if thoroughly done should result in the disappearance of the bacillus within 10 days. It is not desirable that the boy should return to school before the local trouble has been cured.—ED. L.

PUBLIC VEHICLES AND INFECTION.

To the Editors of THE LANCET.

SIRS,—I was riding the other day inside an omnibus belonging to one of the large London companies when I witnessed the following incident. A child sitting on the knee of its mother, a woman of the working classes, coughed and choked. In an instant the conductor who was descending from the roof ran down the remaining steps and sternly asked the woman, "Has that child whooping-cough?" Reluctantly and resentfully she admitted that it had. "Then take it outside," said the conductor, and without directly questioning his authority, although unwillingly, she did so the next time the vehicle paused to set down passengers. I confess to having been a little surprised at the rapidity of the conductor's diagnosis, the masterfulness of his method, and the obedience of the mother—and a little sorry for the child, while at the same time I should like to know what discretion there is, or authority, to remove anyone with such a complaint from an omnibus, and whether I can another time if I suspect a child of suffering from anything like whooping-cough insist on the conductor investigating the matter and taking steps for the removal of the invalid.

I am, Sirs, yours faithfully,

July 4th, 1899. VIATOR.

PS.—I enclose an extract from the *Daily Chronicle* of June 30th which shows that indifference to the risk of infecting others is not confined to what are sometimes called the "lower orders."

TRAVELLING WITH THE WHOOPING-COUGH.—A Bournemouth correspondent thinks, very properly, that something should be done to stop the travelling in public conveyances of persons suffering from infectious diseases. His wife and two children were going to London the other day, the children on their way to their respective schools, and at Southampton a lady and a child entered the compartment. After the train had started, not to stop again before it reached London, the child had a violent paroxysm of whooping-cough, so that the other two children were exposed to the infection all the way to London, as there was no opportunity of changing. Our correspondent wonders whether such a case would justify the stopping of the train by pulling the cord. It ought to.

"THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION."

To the Editors of THE LANCET.

SIRS,—It is suggested in an annotation in THE LANCET of July 8th on the work of the Metropolitan Provident Medical Association that the sum of £641 (the difference between the payments of the benefit members of the association and the amount paid to the medical officers) might in future be paid to the medical officers. May I explain that this sum represents the maintenance and cost of the dispensaries and the cost of the drugs.

I am, Sirs, your faithfully,

THE TREASURER OF THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

Lamb's Conduit-street, July 11th, 1899.

ERRATA.—In our issue of June 10th there appeared a letter signed "A. H. Choksy." It should have been signed N. H. Choksy. Also in line 24 of the letter the word "assist" should have been "insist."

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Inoculation for Enteric Fever.—The Crusade against Mosquitoes.—The Progress of the Plague.—The Report on the Outbreak at Bangalore.

THE Secretary of State has sanctioned the resumption of voluntary inoculation against enteric fever which, it will be remembered, was instituted during the visit of Professor Wright to India while acting on the Plague Commission. It is difficult to understand why it was suspended, as so far as it has been tried it has given promise of protection. This form of fever has been terribly on the increase. Before 1880 the death-rate in the British Army of India was only 2·03 per 1000. In the 10 years ending 1890 it rose to 3·79 per 1000. In 1896 the mortality was 6·31 per 1000, and in 1897 it was no less than 9·01 per 1000. Enteric fever thus caused more than a third of the total deaths. The loss of 616 young soldiers' lives in one year is a very serious matter, especially when it indicates that there were 297 men constantly sick from this disease and that the average duration of a case was 53 days. Besides the waste of life the total loss of service is enormous. The death-rate at Agra was no less than 45·04 per 1000, and at Mhow, Meerut, and Peshawar it exceeded 16 per 1000. Considering the liability of the youngest soldiers, and especially those newly arrived in India, to contract this disease it is incumbent upon the authorities to urge the adoption of protective inoculation in every possible way. Compared with enteric fever the dangers of small-pox are infinitesimal, and considering the special dangers in India and the fatality of the disease here it is reasonable that the opportunities of protective inoculation should be offered to every soldier before he embarks for this country.

Orders issued by the Government of India to civil surgeons with entomological proclivities require them "to make collections of mosquitoes and other flies that bite men or animals

in accordance with the instructions contained in Professor Ray Lankester's pamphlet" with a view of determining the possible connexion of malaria with mosquitoes. For the general destruction of mosquitoes several methods have been tried. In many places the engineer has been successful by draining the marshy areas. In others the use of kerosene by throwing it into the water where it forms a film on the surface has prevented the developing larvæ from reaching the air and has thus brought about their destruction. A more recent experiment has been the employment of permanganate of potash which is said to kill the insect in all stages of its development. As this chemical has also been largely employed for purifying the water of doubtful wells and especially with the view of protecting against the cholera bacillus it would seem particularly applicable for use in India. The installing of fishes in stagnant ponds must necessarily be of very limited application.

In consequence of plague having broken out at Bushire Captain Rainier, I.M.S., and Assistant-Surgeons Beale and Kirkpatrick have left Karachi for duty there. At present only a few cases have been reported. Other medical officers have also been ordered to hold themselves in readiness to proceed if required. There is an increase of plague reported from the Mysore province, chiefly in the Bangalore and Mysore districts. Bangalore city and cantonment are at present supposed to be free. There has also been a considerable increase in the Belgaum district. At other places plague is either stationary or subsiding. In Calcutta only 11 deaths were returned for last week, but a few have again been reported from the Mofussil. The general mortality in Bombay keeps high—viz., at a rate of 36·70 per 1000 per annum—and as there are no other epidemic diseases to account for it the plague is probably not diminishing as rapidly as was anticipated.

A report on the outbreak of plague in the civil and military station of Bangalore has recently been published. In its main features it tells us very much the same as other reports about plague, but the compiler in some parts is particularly candid as to the failure of certain of the plague measures. "If any lesson is to be learnt from the result of these measures it is that plague cannot be kept out of a place by railway, still less by road, inspections." "It may at once be admitted that segregation was on the whole a failure." "Hakims and vaids gave such untrustworthy certificates." "The authorities cannot fight the people and deal with the plague effectively at the same time." "The difficulty seems to be to fix a satisfactory medium between coercion and practically letting things slide." These and other comments show that the active repressive measures which were at the time of the outbreak the policy of the Government, cannot be pursued with success amongst the natives of India. The segregation of "contacts" appears to have been carried out to the extent of partially isolating 2485 people, and there were only 3·06 per cent. of these who developed plague. This is much the same proportion as was found on a larger scale to have developed in Bombay and justifies the remark that the 76 cases which developed were not worth the trouble and expense which segregation caused. The writer of the report is a civilian and not a medical man and it is on this account probably that he ventures to write that "this is one of the instances in connexion with plague where facts and science do not square." The allusion is to the non-occurrence of cases amongst the inhabitants of a village after its evacuation, and he says "Scientifically it would seem that allowing a certain period for incubation when plague cases are occurring daily the disease ought not to cease immediately on evacuation." There is no mention of the number of cases which had occurred in this village or of the number which were at the time being reported. It is merely stated that "cases had continued to occur in this village." The village is not mentioned at any other part of the report so that the cases occurring were probably very few and the evacuation took place at the end of December when the outbreak in the station had nearly subsided. Under these circumstances it is not at all extraordinary that further cases did not develop and the example is certainly not an instance "where facts and science do not square." Another evacuated village is also referred to in which "cases occurred here persistently" and a few cases occurred within five days after evacuation. These are both instances of the value of evacuation, but they do not support the civilian in his attempt to discredit medical science. No reports from the medical officers either of districts or hospitals are given. For purposes of statistical information the compilation will add to the library, but beyond being a record of the failure of several measures it can hardly be said to be instructive. No doubt the civilian and military administrators had special difficulties to contend with at Bangalore, but when the matter is essentially a medical one medical men should be given larger control or, at any rate, in the record of such an outbreak they should at least have been called upon to give their evidence.

June 21st.

THE THIRD INTERNATIONAL CONGRESS ON POOR RELIEF.

(BY OUR SPECIAL COMMISSIONER.)

AMONG the numerous international congresses which will be held in connexion with the Paris Universal Exhibition and which are of interest to the medical profession, the Congress on Public Assistance and Private Charity is likely to attract many members. It will meet in the Palais des Congrès in the Exhibition grounds, from July 30th to August 5th, 1900. The French Government will be officially represented and the Governments of all the foreign Powers are invited also to send representatives. M. Casimir-Perier, formerly President of the French Republic, will preside over the Congress. Dr. H. Thulié is the general secretary and all communications should be address to the "Secrétariat Général du Congrès International d'Assistance Publique et de Bienfaisance Privée, rue Cambacérès, Paris." This is the part of the Ministry of the Interior where the departments relating to Public Health and Poor Relief are situated and the chief of this section is M. Henri Monod who is also a member of the executive committee of this Congress. But in this, as also in regard to the Medical Congress, there is an amalgamation of congresses. Thus what used to be a separate Congress dealing with the relief of the poor by providing work will now form the fourth section of this one Congress. All communications relating to this particular phase of the subject should be sent to M. Louis Rivière, 91, rue Jouffroy, Paris.

The first International Congress on Poor Relief was held in Paris during the Universal Exhibition of 1889. The facts then brought forward and the ideas enunciated have since been spread far and wide and show the practical utility of such congresses. They have inspired legislators and have helped to guide the administrators of various charities. The second International Congress on Poor Relief met at Geneva in 1896 and there have also been two French national congresses on the same subject held at Lyons in 1894 and at Rouen in 1897. Nearly all the organisers of the Congress of 1889 are assisting in the management of the Congress of 1900. They are anxious to draw a sharp line of demarcation between private charity and assistance given out of the public purse; but they consider that both forms of relief, though different, should be made to work harmoniously together. Therefore, while inviting all public functionaries concerned in the relief of the poor to attend the Congress, they also invite private individuals or representatives of private voluntary charities. In a word, the Congress is open to all who are interested in relieving poverty and in reducing pauperism. This naturally includes ladies who as Poor-law guardians or as visitors among the poor have a practical knowledge of the problems to be studied. The subscription for membership is 20 francs, or 16*s*., and everything will be done to render the visit of the members agreeable and interesting. Excursions will be organised and visits paid to different institutions concerned in the relief of the poor, and the money paid as subscriptions will serve to publish a report of the Congress, which will be distributed to all the members.

The Congress will meet in general assembly in the afternoon and the sections will meet separately in the morning. The Congress is divided into four sections. The first section will deal with the relief and education of the children of the poor; the second section with the relief of the poor who are sick, infirm, incurable, or aged; the third section will treat with the question of the relief of able-bodied paupers, of help by means of giving work, and other general questions; and the fourth section will be concerned exclusively with the organisation of

work for the poor. Four subjects are set down for discussion by the Congress as a whole and when gathered together in general assembly. The first question relates to the methods and the efficacy of home relief and the coöperation which should be established for this purpose between public and private charities. The second question concerns the education and treatment of children who are received by the State or municipal poor relief institutions and by private institutions and who for moral reasons cannot be placed in cottage or other private homes but must be kept in reformatory schools and other similar establishments. The third question suggests that assistance given by providing work falls essentially within the domain of private charity. On this the British delegates should have a good deal to say, for our workhouses are not private charity and the whole of our Poor-law is based on the principle that even able-bodied paupers have a right to relief when they are willing to do the task allotted to them. The fourth question is of special interest to medical men as it deals with the assistance to be given to those who have insufficient means and who are suffering from tuberculosis.

Papers may be written in a foreign language and they may be published in the language selected or translated into French. But French is the official language of the Congress and all communications should be accompanied by at least a summary in French and it is absolutely indispensable that all resolutions should be written in French. Speeches also may be delivered in a foreign language, but it is urged that all members speaking in a foreign language should take measures to have their speeches translated at once into French. From these rules it will be seen that some definite expressions of opinion will be obtained. The sections will discuss, the general assemblies will vote, and as all the members of the Congress can participate in the vote the resolutions carried should have weight and serve as an indication of the opinions entertained on the questions at issue. Though poor relief is not a medical question it touches very closely medical interest. The sick poor have to be attended by medical men and the relations of medical men with public and private charities form one of the most difficult economical questions with which medical men have to deal. It would be well, therefore, if some medical men who have made a study of these problems were to attend the Congress. So far as France is concerned we are pleased to note that a great number of eminent medical men are on the organising committee of the Congress.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Council and the Notification of Phthisis.

AT the meeting of the city council on July 5th the report on the proposed regulations with regard to the notification of phthisis which was referred back to the Sanitary Committee at the previous meeting was again submitted and carried by an overwhelming majority. The town clerk read a memorial from the Manchester and Salford Sanitary Association supporting the proposals as to notification. Dr. Braddon expressed his regret at being absent from the previous meeting when one of the councillors had characterised the proposals as a piece of espionage, tyranny, and blackmail and had spoken of medical men as those who would certify a whole parish as phthisical for the sake of the half-crown fee. He was surprised that his medical colleagues did not at once challenge the statement. Dr. Niven's scheme is first of all to secure the registration of cases at the public institutions. The homes of the patients will be visited by a medical assistant who will advise the family as to the means to be adopted for preventing others from taking the disease, and if necessary the house will be disinfected at the cost of the city. The disinfection of the homes of patients of the Consumption Hospital in Manchester has long been carried out by the Health Office, which has coöperated with the hospital staff to the advantage of the community. This is done not only with the sanction, but in most cases with the grateful thanks, of the patients' friends. In the case of private patients similar results will no doubt be obtained, as Dr. Niven has shown a scrupulous regard for the rights and privileges of the private practitioner. His plan includes educational teaching, chiefly by lectures, and in the coming winter the Manchester and Salford Sanitary Association will do good work in this direction. There is a movement, also, for the extension of hospital accommodation in the interest of the victims of tubercle, and Mr. Crossley who has already done so much for the Consumption Hospital has offered to spend the munificent sum of £45,000 for the purpose of providing a hospital if the citizens will undertake its maintenance. Half, or more than half, of the feeling against the notification of phthisis has arisen from the idea that the disease is hereditary—that it is "in the family" and carries with it a stigma which affects the prospects in life of the whole of its members. When the idea of heredity has been superseded by that of microbes the objections to notification, now widely felt, will disappear, but care will have to be taken to use great consideration both for ignorance and prejudice if the notification of phthisis is to become popular.

Manufacture of Gas Residuals.

The Corporation Gas Committee considered on July 7th the statements made before them a fortnight previously by members of the firm of Hardman and Holden, Limited, with the object of persuading the corporation to continue the present system of selling the gas residuals by contract. The committee resolved in accordance with the recent decision of the city council to go forward with their application for money to enable them to manufacture the products of the gas residuals themselves. It is curious that among a series of summonses taken out by the Health Committee of the corporation against chemical manufacturers in the districts surrounding Manchester the first, which is only partly heard, is against the very firm which petitioned the corporation to let them continue to deal with their residuals. They carry on very extensively the distillation of coal tar, the manufacture of sulphate of ammonia, the manufacture of sulphuric acid, the distillation of benzoline, and the manufacture of pyridine. This is done in the midst of a crowded population. The final hearing of the case is adjourned.

Manchester Companies Volunteer Medical Staff Corps.

The Manchester Volunteer Medical Staff Corps was inspected on July 1st by Lieutenant-Colonel Duke, R.A.M.C., principal medical officer of the North-Western district. They paraded just over 200 strong, under the command of Surgeon-Captain W. Coates, and were put through several movements of battalion stretcher drill. No. 1 company was then told off to form dressing and collecting stations, while No. 2 company was put through stretcher, hand-seat, cacolet, and waggon drill respectively. At the conclusion of the inspection Colonel Duke complimented them on their smart appearance, saying that this was the first time he had seen a real bearer company in this district in a proper state of organisation. He had been specially pleased with the drills, which were equal to any he had seen in the Royal Army Medical Corps, and much credit was due to both officers and men for their enthusiasm and for the time that they must have given to the work. He heard that they had to pay for a suitable place to drill in and he thought the least that the city could be expected to do was to accommodate them with an open drill-ground. "If there was a threatened invasion of this country the Volunteer Medical Staff Corps of Manchester would be called out long before any other Volunteers." It appears that the War Office has selected the Manchester companies to form a bearer company and two field hospitals in case of mobilisation of the First Army Corps and that corps would be mobilised on the first threat of invasion.

Dalton's Tomb.

Since the notice of its condition appeared in THE LANCET an appeal has been made by the president and secretary of the Manchester Literary and Philosophical Society in the local papers for help in restoring Dalton's tomb. This appeal is made "to those residents of Manchester, chemists and others, who are interested in the work and fame of John Dalton." It appears that the funds of the society cannot be used for the purpose, but the council "have felt that the continued neglect of the resting-place of one of Manchester's greatest worthies would be a scandal and a discredit." The repairs urgently needed would cost about £25, but they wish for a further sum of £50, the interest of which would suffice for keeping the tomb in repair. It is to be hoped that there is sufficient sympathy in Manchester for the memory of a great man to

make it easy to raise this small sum even without the help of corporate funds.

Owens College.

The introductory address at the opening of the winter session of the Department of Medicine will be delivered by Sir J. Crichton Browne.

July 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Case of Interest to the Medical Profession.

ON July 5th, in the Edinburgh Small Debt Court, Sheriff Hamilton decided a case brought by Dr. D. R. Murray against a lady patient whom he had attended during 1895 and 1896. The pursuer rendered an account to defender for his professional services stating that it was for 20 visits during the time of attendance. The defender declined to pay on the ground that she was entitled to a detailed account giving the date of each individual visit. She did not dispute the amount of the account. Dr. Murray declined to send any further details as the amount was not disputed and as he in his rendering of the account had followed the common usage of medical men. The Sheriff held that the defender was entitled to get a further detailed account and as the same had not been given when it was asked for he declined to award pursuer the expenses of the summons.

The Professorship of Physiology at Birmingham.

Dr. E. W. Wace Carlier who for many years acted as senior assistant to the late Professor Rutherford and as Lecturer on Experimental Physiology in Edinburgh University, has been appointed Professor of Physiology in the new university at Birmingham. After the death of Professor Rutherford last winter Dr. Carlier carried on the work of the physiological department during the winter session. Dr. Carlier graduated M.B., C.M. (honours) in 1886 and obtained the degree of M.D. from the Edinburgh University in 1891, when he was awarded a gold medal for his thesis. He is the author of numerous papers on physiological subjects.

American Meat in Edinburgh.

Mr. Rufus Fleming, United States Consul in Edinburgh, in a recent report to his Government on the possibilities for American trade in Scotland, dealt with the openings in Scotland for American auto-cars, boots and shoes, printing and binding machinery, cement, and meat. Regarding the last-mentioned, he spoke of the severity of the laws dealing with meat inspection in Scotland under the Public Health Act of 1897. During the past year in Edinburgh the inspectors had paid over 6000 visits to butchers' shops, while the quantity of meat seized or given over as unfit for human food was 149,163 lb. One Canadian carcass had been seized. Notwithstanding the severity of the regulations not one pound of American meat had been condemned during the past year, although the quantity of American chilled beef alone used in Edinburgh, not including Leith, amounted to on an average 31,500 lb. per week.

The Glasgow and West of Scotland Coöperation for Trained Nurses.

This institution has since its formation in 1893 proved a success both in respect to the work done by the nurses and as regards its financial position. The Coöperation now includes close upon 100 fully trained (hospital) nurses whose professional qualifications are carefully investigated by a medical committee before they are admitted. In order to meet the constantly increasing requirements of the public the executive committee now recognise that they must increase the staff to 150.

The Memorial Bust of the late Professor Rutherford.

On July 11th, a marble bust of the late Professor Rutherford subscribed for by undergraduate members of the physiology class both past and present, was unveiled by the Principal Sir William Muir. The Lord Provost and Professor Schafer sent letters of apology for absence. The chairman of the Memorial Committee Mr. W. Macdougal gave an account of how the memorial had been set on foot and how Mr. John Hutchinson, R.S.A., had been commissioned to execute it. After a few words from Sir William Muir the bust was unveiled. The pedestal bears the following inscription:—

"In piam memoriam Gulielmi utherford, M.D., F.R.S., in Universitate Academica, Edinburgensi, ab anno MDCCCLXXIV. ad annum MDCCCXCIX., Physiologiae Professoris, hanc effigiem, posuerunt discipuli eius Universitatis huius cives. A.D. MDCCCXCIX."

Sir William Turner then spoke upon the late Professor's character and work, and referred to the fact that it was for the first time in his experience that a memorial had been raised to a teacher entirely on the instigation of the students themselves.

July 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

ACCORDING to the list of Fellows and Licentiates of the Royal College of Surgeons in Ireland which has just been issued there are living at the present time 382 Fellows, 11 Honorary Fellows, 2746 Licentiates, 84 Diplomates in Public Health, and 517 Licentiates in Dental Surgery. Many are scattered over different parts of the world. Several hold commissions in the medical department of the Royal Navy and in the Home Army and the Indian Army. A considerable number enjoy a European reputation. Among those holding titular honours are one peer, four baronets, two K.C.B.'s, 11 knight bachelors, 13 military C.B.'s, two civil C.B.'s, two C.M.G.'s, one K.C.V.O., eight D.S.O.'s, while two hold the Victoria Cross. It is said that the Licentiates of the College of Surgeons in Ireland hold more military distinctions than any of the medical graduates or licentiates of the other universities or colleges of the world.

The Permanent Committee of the Anti-Tuberculosis Association.

A meeting of the Permanent Committee of the National Association for the Prevention of Tuberculosis was held yesterday at the Royal College of Physicians of Ireland, Professor Bennett, the President of the Royal Academy of Medicine, being in the chair. It was decided that a public meeting should be held at the Mansion House to promote the objects of the association. It was further resolved that the Registrar-General for Ireland should be appointed President of the Dublin branch.

Dublin Corporation (Boundaries) Bill.

The Duke of Northumberland's Select Committee of the House of Lords resumed the consideration of the Boundaries Bill on July 6th. Sir Charles Cameron and Sir Francis MacCabe were the two principal witnesses, but their evidence was much the same as that which they gave when recently the Bill occupied the attention of the House of Commons. Sir Charles Cameron stated that the death-rate of Dublin would always, in his opinion, remain high while the present conditions as regards population continued. There were 54,000 families in the city in 24,000 houses, and of these 32,000 persons occupied 48,000 rooms. Sir Francis MacCabe alluded to the great density of the population of Dublin per acre, no fewer than 117,000 persons living in tenement houses.

Health of Belfast.

In his report, presented to the city corporation on July 5th, Dr. Whitaker, medical officer of health of Belfast, stated that between May 21st and June 24th, 1899, 432 cases of zymotic disease had been notified and of these 190 were typhoid fever. There were 95 deaths from zymotic disease, 112 from phthisis, and 147 from diseases of the respiratory organs. The annual death-rate from all causes was 20·8, 2·8 from zymotic diseases, and 7·6 from affections of the chest. Scarlet fever of a mild type is still prevalent and the deaths from measles are becoming more numerous, but the death-rate from all causes is much less than that of the preceding month.

The Local Government Board for Ireland.

The resistance by local bodies to the action of the Local Government Board for Ireland seems to continue. That body wrote recently to the Newtownards (co. Down) Guardians suggesting that as the lady appointed as trained nurse in their infirmary had not a diploma in midwifery, and

as the populous district of Newtownards had not a midwife one should be appointed whose services should be at the disposal of the medical officer of the workhouse. The master of the workhouse said that no inconvenience had arisen in the house owing to the absence of a midwife as the medical officer always attended when summoned and when not at home he left a medical substitute. The guardians unanimously decided to inform the Local Government Board that no inconvenience had arisen and that there was no necessity for the appointment. Again at Cookstown, Mr. Agnew, Local Government Board inspector, has pointed out in his report that a woman, the mother of several illegitimate children, was employed as attendant in the infirmary and as a result she was removed to the body of the house and her place was taken by a paid attendant. Commenting on this matter, a special committee of the Cookstown Guardians, appointed to take into consideration the action of the Local Government Board, say:—

> We desire to protest in the strongest manner against the action of the Local Government Board in thus compelling our officials to boycott this woman against whom there is no charge of misconduct while in the house; and why they should be deprived of such useful services in the infirmary as she is capable of and the ratepayers saddled with the expense of paid servants from outside to do work which she was perfectly able and willing to do is more than we can understand. We shall be glad to be enlightened as to the reasons which have induced the Local Government Board to commit what seems to us an act of cruelty to the woman and a useless waste of the ratepayers' money.

Another bone of contention between boards of guardians and the Local Government Board is the question of fees to be paid for medical locum-tenents and for additional consultative advice. The Limavady Guardians thought 10*s.* 6*d.* with 1*s.* a mile a proper consultant's fee, the same to apply to a night visit, a form of remuneration which the Local Government Board decided very wisely was not adequate. They also declined to approve of the scale of fees proposed by the Omagh Guardians for extra professional services and as a result that body has decided to go back to the old guinea fee, but in both these cases strong exception was taken to the action of the Central Board in Dublin. The fact of the matter is that in the past one of the defects in the government of Ireland was the location of all the controlling bodies—legal, educational, medical, local government, boards of asylum control, &c.—in Dublin. These often were obliged to go counter, and sometimes in a very arbitrary and non-conciliatory manner, to local authorities in the provinces. It was thought that when local government was conferred this method of parental control would cease, and hence any attempt to exert central authority is now very strongly resisted and the body most objected to is the Local Government Board. We are simply now seeing the pendulum swinging away from the point of central authority. In time matters will come right and a position of stable equilibrium will be reached.

Down District Asylum.

On July 1st a new wing on the male side of the Downpatrick Asylum which is to be used as an infirmary was formally opened. That department has been enlarged from its original capacity for 15 patients to a capacity on an ample scale for 56 patients, or about 20 per cent. of the total capacity of the male side. There are a commodious dining-hall in the corridor, a spacious annexe, and two padded cells.

Belfast Charities (Football) Competition.

The donations (£250) realised from the gate-money at the Belfast football competition have been sent to the various hospitals and other charities in Belfast.

Belfast Royal Hospital.

The Coulter Exhibition has been awarded to Mr. J. W. West. The summer session ends to-day.

July 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sewage and the Seine.

ON July 8th the gates of the great sewer which discharged into the Seine at Clichy and received the drainage of the whole of Paris were solemnly closed in the presence of the Minister of Public Works. From henceforth the great work of Durand-Claye is a *fait accompli* and no more sewage will foul the Seine. The sewage is led through a canal which passes under the Seine and is distributed on to two sandy tongues which project into the river as it leaves Paris. These two peninsulas, Gennevilliers and Achères, formerly uncultivated and sterile, are to-day, thanks to the sewage, transformed into fertile ground producing several crops per annum. The water percolating through the sand is perfectly filtered and falls into the Seine perfectly clear; while the very cultivators who formerly put all sorts of difficulties in the way of allowing sewage to come on their land now fight as to who shall be allowed to have the same. The smell, about which there were doubts at the beginning, is practically *nil*, and hardly any odour is perceptible even to one walking in the middle of the fields. This gigantic piece of work, begun over 20 years ago, has only just been accomplished, for the two peninsulas above named were not sufficient in themselves to deal with the whole of the sewage furnished by the drainage system, since the adoption of the law making it necessary for all owners of property to connect such property with the drains was passed. Another sewage farm has therefore been formed on a sandy plain to the north of Paris at Mitry, where the Assistance Publique possess a large tract of land. Special plant has been put down at Colombes to raise the sewage to a level from which it will flow gently down into the plain of Mitry and it is probable that a vast pasture will be formed on which will feed the herds to supply the milk used by the Assistance Publique. The Seine, however, has been fouled for so long that it will not really become sweet for many years, while the factories at Ivry and Charenton which discharge into the river before it enters Paris will continue to defile it for so long as they are permitted to do so. This magnificent work which has been carried through at great expense will certainly render a residence on the banks of the Seine more pleasant, will fertilise hitherto sterile lands, and above all will allow of the compulsory abolition of the privy system. The adversaries of the new system formerly maintained that privies were less dangerous in towns than in the country because they are better constructed and even if they do leak there is but little danger of their fouling drinking water for no one in Paris drinks rain-water, while the expense to proprietors of adopting a universal system of connexion with the drains would be enormous. They also argued that the new scheme would supply a quantity of spring water far in excess of the needs of the county and generally that the finances of the town would never stand the strain. Now, however, that the work is accomplished no person grudges the expense. The money is repaid in the shape of human lives and Paris cannot spend too much, considering the number of foreigners who visit her, in straining every nerve to have the right to be called the most healthy city of Europe.

Extract of the Corpora Lutea.

At the meeting of the Society of Biology held on June 24th, Monsieur A. Lebreton laid before the society the results of his researches into treatment by means of extract of the corpus luteum. In an inaugural thesis M. Lebreton had already pointed out that by their histological structure it was evident that the corpora lutea were really ductless glands and that the benefits of treatment by ovarian extract depended mainly upon the principles contained in corpora lutea. As a means of experimental verification of his theory he had some capsules made, each containing 0·05 of a centigramme of pure corpus luteum. These he administered to three patients suffering from the following symptoms: flushes of heat, buzzing in the ears, sweats, feelings of "sinking" sometimes going on very nearly to fainting, nightmares, breathlessness, palpitations, and digestive troubles—in a word, all the symptoms due to "ovarian insufficiency." Two capsules per diem were given before the principal meals of the day. The drug acted promptly with notable success and there were no ill effects noticed. M. Lebreton is now pursuing his researches into the therapeutics of the corpus luteum as regards the various troubles of pregnancy—notably vomiting. He has already met with two cases in which the results were conclusive but reserves publication until he has a larger number of cases upon which to report.

Conviction of a Medical Man as an Accomplice of a Female Quack.

Dr. Gibert of Montreuil has just been found guilty by the Correctional Tribunal of the Seine of having lent his aid to a somnambulist who for many years has treated sick

people and diagnosed their complaints by touching the hands while she was in a real or fictitious somnambulistic trance. She had already been convicted twice for illegally practising medicine. She went into partnership with Dr. Gibert who used to write prescriptions at her dictation and sign them, for which dishonourable work the unfortunate man received two francs an hour. On his prosecution he admitted the facts, but argued that he often revised the diagnoses of the somnambulist and in fact did not by any means always agree with them, but in addition he maintained that her special gifts were of great use in the case of patients who did not attend themselves for consultation but sent a lock of hair or some article of dress which they had been in the habit of wearing. The court found Dr. Gibert guilty and fined him 16 francs, while the woman was fined 50 francs. During the same week a quack calling himself Dr. Saint-Paul who had a number of "patients" among whom was the prosecuting magistrate himself, a fact constituting an absolute proof of the actions complained of having taken place, was acquitted, much to the general surprise, the magistrate saying that he saw no evidence upon which to carry the case further.

July 11th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Professor Grocco on the Health of Leghorn.

THE recognised head of the Tuscan school has just had to intervene on behalf of the great seaport of Central Italy, usually thronged at this season for the excellent bathing to be had north and south of its suburbs. A report insidious in its origin and no less insidious in its spread, has for some weeks been in circulation as to the presence of fever of a low infective type in Leghorn. The name of Dr. Pietro Grocco (Professor of Clinical Medicine in the Florentine Istituto di Studi Superiori and director of the "Carlsbad of Italy" as the much frequented waters of Montecatini are called) has been wantonly invoked to give authority to the report and the result has been an extraordinary abstention of the public that has hitherto resorted to the Livornese shore for change and sea-bathing. Losing no time in safeguarding his professional reputation and the *stazione balnearia* so dear to provincial Tuscany, Professor Grocco has published a trenchant denial of his ever having even hinted at the insanitary state of Leghorn and assures the public that, if asked to recommend a town "come salubra soggiorno di mare" (a healthy seaside resort) he would emphatically "indicate" Leghorn. There is no maritime centre of population, he adds, in which one or more cases of infective fever may not be found, particularly during the summer heat; but it so happens that at the present time Leghorn is singularly free from such cases, and so (I quote his words textually) he "would without hesitation send his own children to Leghorn to-morrow if they wanted sea-bathing." His opportune statement has had a re-assuring effect. The insidious and ill-inspired report has ceased to deter the public, and the "Tuscan Brighton" now rejoices in hourly accessions to its summer *clientèle*. The truth is that rival seaside resorts feel so acutely the prevailing competitive spirit that their champions allow their zeal to outrun their discretion, so that in the interests of their own special candidate for public favour they are apt, in King George III.'s phrase, to become "economists of truth." This is very much the case when to private interests there are added international jealousies—the French Riviera, for instance, having nothing good to say of its Italian rival, and *vice versâ;* while both are apt to combine in a common depreciation of, for example, the delightful Austrian seaboard typically represented by that favourite resort of the Viennese aristocracy—Abbazia.

Rehabilitation of "Fanciulli Tardivi."

In supplement to what I wrote last week on the efforts Italy is at length making to rehabilitate her imbecile young I can now add to Florence and Turin the great capital of Lombardy as another centre of an "Istituto pei Tardivi." At the instance of the National League for the Protection of Undeveloped Childhood Milan has just held a meeting, mainly composed of medical men and schoolmasters, at which a resolution was passed to supplement "every group of primary schools with a separate institution for the reception and training (medical, pedagogic, and educational) of the more backward (*tardivi*) of the young scholars." A committee was thereafter drawn from the medical, the pædiatric, and educational representatives of the rational movement and includes such authoritative names as Professor Edoardo Porro, of the Milanese School of Obstetrics; Dr. Luigi Casannova, Director of the Deaf and Dumb Institute; Professor Ottone Brentari (the eminent educationist), and Signor Gonnelli-Gioni, of whose career as the paladin of this humanitarian crusade I have already given some account. The organisation for the rescue of the country's imbecile young may now be said to be "on wheels" and all well-wishers to the "Italy that is to be" must join in bidding it God-speed.

The World's Show of Electricity at Como Destroyed by Fire.

14,000 square metres of building, with 11 galleries accommodating the specimen work of 1000 exhibitors, reduced to ashes in 40 minutes! Such was the fate on Saturday forenoon of the World's Show of Electricity organised at Como in commemoration of the first centenary of Volta's invention of the pile. I have more than once[1] drawn attention to the attractions of this magnificent Exposition—attractions appealing to medical men in the domain of "electro-therapeutics," of which Italy may be called the parent—attractions, moreover, addressing themselves to all interested in scientific history for the imposing array of documents bearing on Volta's mighty work. All these are entirely destroyed, except a glass case containing the library of Volta, the sword of Senator given to him by the first Napoleon, his gold watch and a few other relics of the kind, including Bertini's portrait of him. The damage, which is covered largely by insurance, is estimated at 20,000,000 lire, but how will that or three times the sum compensate science for the loss of so much precious historic material? One or two learned bodies which had refused to contribute to the exposition their Voltaic κειμήλια (heirlooms) are now congratulating themselves on the caution for which they endured not a little obloquy, thus supplying to similar bodies nearer home a much-needed precedent when importuned to enrich this or that "celebration" or "centenary" with the memorial treasures of its hero which they may happen to possess. Another admonition put in evidence by this catastrophe is the danger of electricity as a possible cause of fire. Earthquakes and floods have hitherto been Italy's characteristic and traditional "visitations"; but here we have the agency she herself introduced to science causing a destruction unparalleled for its combined rapidity and extent. Fire started and fed by electricity is now a "danger of the future" demanding special forethought and surveillance.

July 11th.

RUSSIA.

(FROM A CORRESPONDENT.)

The Pushkin Centenary.

DURING the past few weeks the centenary of the birth of Pushkin, the most popular, if not the greatest, of Russian poets, has been celebrated throughout the length and breadth of the Russian empire and in some of the adjoining Slavonic countries. The occasion was obviously not one which appealed in any special manner to the medical profession, but one of the leading medical societies of St. Petersburg—the Society of Russian Practitioners—has taken the opportunity of joining in the effort to commemorate the occasion worthily and has opened a subscription for the endowing in one of the sanatoria of the society either a bed or a library for the patients which is to bear the name of the illustrious poet.

The Famine in Russia.

Details of the famine which now prevails in the south of Russia and which seems likely to become even worse in the next few months are now being published in the Russian papers, both lay and medical. The following appear to be the salient facts of the case and it must be admitted that the prospects are on the whole extremely gloomy and that there is every probability that during the present summer famine and its attendant diseases—particularly scurvy, relapsing fever, typhoid fever, and other abdominal diseases—will cause a very large number of deaths and an incalculable

[1] THE LANCET, Feb. 25th, 1899, p. 534, and May 27th, 1899, p. 1462.

amount of suffering throughout the stricken provinces. The principal cause of the failure of the crops has been a winter of extraordinary mildness and an almost complete lack of the usual falls of rain and snow in the winter and spring months. The spring has been, on the other hand, unusually cold and the summer very late in coming. The spring rains have been extremely scanty and in many places have failed altogether. In some of the southern provinces the cold weather of May, with bitter winds and occasional night frosts, has suddenly been replaced at the beginning of June by days and nights of extreme heat, and such crops as there were have been burnt up by the hot, dry winds. This has been especially the case in the governments of Samara and Kherson. In the south-western provinces, on the other hand, the weather still remains unusually cold for the time of the year and the latest telegrams—under date June 5th (17th)—report low temperatures and a general continuance of drought, though in a few places a slight rainfall has to some extent improved the prospects. In the government of Samara large numbers of persons are already suffering from the dearth and scurvy is widely prevalent. The Russian Red Cross Society is doing noble work on a large scale in order to relieve the suffering. In this government alone 67,455 persons are being provided with hot food daily by the society and 55,975 are receiving gifts of flour and grain; in all, 123,430 persons are being aided by the society in this government. A special medical service to treat the many thousands who are suffering from scurvy has also been organised, and 19,727 patients have already been under treatment. Of this total as many as 2285 were sufficiently severe cases to require treatment in hospitals. The society has organised as many as 189 temporary hospitals for the purpose in this government. The medical *personnel* in this government employed on famine work consists of 10 medical men, 18 medical students, 68 sisters of mercy, 45 female *feldshers* and a number of other female helpers, so that the total staff numbers as many as 204 persons. Three districts of this province are especially badly affected and in these 11 per cent. of the total population are receiving aid from the Red Cross Society, while nearly one-third are obtaining relief in the form of presents of grain from the *zemstvos*. In the adjoining easterly government of Ufa no less than 127,081 persons are given hot food daily from the society's kitchens and 62,702 are receiving flour and grain. On May 24th (June 5th) it was reported that in these two governments 39,982 patients suffering from scurvy had been under treatment and that the medical staff in the two governments employed on famine work consisted of 317 persons working under the Red Cross Society and 130 provided by the *zemstvos*. In many parts of the Kherson government the famine threatens to be extremely serious. "The fields are so bare," it is said, "that they resemble well-prepared tracks for a bicycle race." In the whole government there are only a few places here and there which give hope of a harvest, provided favourable weather prevails during the summer. In the Tiraspol district the condition is almost worse than it was in the great famine of 1891. The drought and the parching winds have scorched up the grass and other crops and the cattle are already dying from lack of food. In Bessarabia, in parts of Nijni Novgorod and Saratof, and in Kharkof the outlook is also extremely bad. In the last-named government not a drop of rain (with the exception of a slight shower on one day) had fallen between April 29th and May 29th (Old Style) and the rye-crop and the steppe grasses of various kinds were reported as rapidly dying under the continued drought In Kief rain has recently fallen—June 5th (17th)—and the prospects have slightly improved. The beetroot crop in this government is good. The fruit and grape harvests, it may be noted, promise to be quite an average throughout the south. In Riazan, Voronezh, and some other governments the crops have suffered in part but to a less extent than in the other governments named. It seems probable that the famine this year will not be confined to European Russia and that in the Transcaspian province the crops will be very far below the average. This is mainly owing to the lack of snowfall in the winter among the hills of Khorassan. There was consequently an insufficient quantity of water for the artificial irrigation channels which alone make agriculture possible in the Transcaspian plains. The mountain streams had all completely dried up by the end of March and the subterranean channels had very nearly become dry. The spring crops have consequently failed and to complete the disaster flights of locusts—a constantly threatened evil in these regions—have appeared and done an immense amount of damage. Troops have been sent out to endeavour to destroy the locusts. It is reported that the failure of the winter snowfall has equally affected the Persian plains on the other side of the hills and that they are also threatened with a severe famine.

June 18th (30th).

Obituary.

RICHARD CONGREVE, M.R.C.P. LOND.

RICHARD CONGREVE, who died on July 5th at Hampstead, was born in 1818 at Leamington and was the third son of Thomas and Julia Congreve. He was educated at Rugby under Dr. Arnold and proceeded in due course to Oxford, having gained a scholarship at Wadham College. In 1840 he took his degree, having obtained a first class in "Greats," or, to give it its official title, the School of Literae Humaniores. He was then elected Fellow and tutor of his college and after a little while he went to Rugby as assistant master, but afterwards returned to Oxford and resumed his tutorship. Among other works he wrote a "History of the Roman Empire in the West" and edited an edition of the "Politics of Aristotle." He also became a student at King's College Hospital and was admitted a Member of the Royal College of Physicians of London in 1866. He never practised, however, and the interests of his life were summed up in a study of the social and religious views of Comte, to the spreading of whose doctrines he devoted all his energies. In accordance with these ideas he wrote a pamphlet called "Gibraltar," in which he seriously maintained that our Indian Empire should be given up. Although he resigned his Oxford Fellowship in about 1874 yet his college at a later date recognised his intellectual powers by electing him to an honorary Fellowship.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated:—

Wednesday, July 5th:

Anatomy and Physiology.—Reginald Anthony Eastmond, Charles Marshall Dickinson, Marchant Richard Johnson, Archie Trevor Moon and George Bevir, London Hospital; William Martin, St. George's Hospital; George Sydney Welham and Francis Talbot, Charing-cross Hospital; Percy Montgomery Rivaz, Hugh Ellis Stanger-Leathes, Alban Anderson Meaden, Hugh Hamilton Serpell, Henry Mills, and George Frederic Furley, St. Bartholomew's Hospital; Jehan Meredith Barlet, Philip George Easton, and Edward Leslie Bartlett, St. Mary's Hospital; Rees Phillips, Middlesex Hospital; Reginald Thomas Collins and John William Gromett, Guy's Hospital; Edward Daniell Parsons, St. Thomas's Hospital; Gerald Lantebury Bunting, Westminster Hospital; and Harry Reginald Allingham, King's College, London.

13 gentlemen were referred in both subjects.

Thursday, July 6th:

Anatomy and Physiology.—Harold Lynch Burgess, Geoffrey Plumpton Wilson, and John Leopold Goldstein, London Hospital; Herbert Kingsley Ward, Mason University College, Birmingham; Harold Branson Butler, Noel Alfred William Conolly, Frederick William Cheese, Alexander Sturrock Petrie, Edgar Severn Ellis, Francis Heygate Ellis, and Frank Harvey, St. Bartholomew's Hospital; Alfred Stroud Hosford, University College, London; Wilfrid Cowan Nimmo and Arthur Henry Sims Richardson, Westminster Hospital; Frederick Cecil Robinson, Richard Willan, and Gordon Moir, Guy's Hospital; Richard James Archibald and Hugh Wheelwright, St. Thomas's Hospital; George Henry Boyden, St. Thomas's Hospital and Edinburgh University; Robert George Ernest Grote, Charing-cross Hospital; Alexander Cameron, Middlesex Hospital; and Nathaniel Richard Phillips, University College of South Wales, Cardiff, and King's College, London.

13 gentlemen were referred in both subjects.

Friday, July 7th:

Anatomy and Physiology.—Bertram Winter Gonin, St. Mary's Hospital; John Duncan Keir, Glasgow University and St. Mary's Hospital; George Frederick Humphreys, Arthur Hewett Turner, and Ernest William Strange, Guy's Hospital; Thomas Lewis Ingram, Cambridge University and London Hospital; Charles Gibbons Seymour and Oswald Mills, St. Thomas's Hospital; Charles Wheen, Oxford University and St. Thomas's Hospital; Henry Arthur Kellond-Knight, St. Bartholomew's Hospital; William Benjamin Swete-Evans, Cambridge University and St. George's Hospital; Alfred Landon Walter Whitehouse, Westminster Hospital; James

Donald Rodriguez and Francis Peter Vieyra, Madras Medical College.

Anatomy only.—John Marie Sloane Duncan, London Hospital; Thomas Morgan, Guy's Hospital.

11 gentlemen were referred in both subjects.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination held in July the following candidates passed in the subjects indicated:—

PART I.

Biology.—J. Cretin, Bristol, and G. W. N. Stevens, Charing-cross Hospital.

Chemistry.—J. Cretin, Bristol; D. J. Lewis, London Hospital; D. A. Stepney and M. L. Tyler, Royal Free Hospital; G. H. Watson, St. Bartholomew's Hospital; and S. H. R. Welch, Charing-cross Hospital.

Materia Medica and Pharmacy.—C. C. Bernard, Royal Free Hospital; G. A. Crowe, London Hospital; A. J. Nicholson, Edinburgh and Cork; J. R. Pooler, Birmingham; D. W. Purkis, St. Bartholomew's Hospital; and Z. Rowlands, H. M. Serjeant, and E. N. L. Wilson, Royal Free Hospital.

PART II.

Anatomy.—W. H. Cotton, Dublin; G. M. Crockett, Royal Free Hospital; J. C. Curtis, Guy's Hospital; K. A. Dawson, Royal Free Hospital; W. C. D'Eath, Charing-cross Hospital; S. R. Dudley, St. Bartholomew's Hospital; K. C. Edwards, Cambridge; C. D. E. Forbes, St. George's Hospital; B. H. Hirst, Leeds; A. H. Hughes, Bristol; M. R. Martin, Royal Free Hospital; T. G. Miles, Guy's Hospital; H. Morrison, Leeds; D. A. H. Moses, St. Bartholomew's Hospital; A. U. Parkhurst, Cardiff; C. M. Scott and L. G. Simpson, Royal Free Hospital; G. B. S. Soper, Guy's Hospital; C. J. Taylor, Bristol; C. M. Woods, Charing-cross Hospital.

Physiology.—C. H. G. Atkyns, Birmingham; J. A. Bartlett, Bristol; C. W. S. Bogga, Leeds; H. R. Coombes, Westminster Hospital; G. M. Crockett, Royal Free Hospital; J. C Curtis, Guy's Hospital; K. A. Dawson, Royal Free Hospital; W. C. D'Eath, Charing-cross Hospital; K. C. Edwards, Cambridge; B. H. Hirst, Leeds; A. H. Hughes, Bristol; J. A. Kilpatrick, King's College Hospital; J. M. King, University College Hospital; M. E. Martin, Royal Free Hospital; H. J. May, London Hospital; T. G. Miles, Guy's Hospital; A. U. Parkhurst, Cardiff; G. Raymond, St. Thomas's Hospital; L. G. Simpson, Royal Free Hospital; W. A. G. Stevens, Guy's Hospital; and R. W. Taylor, Leeds.

FOREIGN UNIVERSITY INTELLIGENCE.—*Buenos Ayres:* Dr. Christfried Jacob, formerly of Erlangen and now of Bamberg, has accepted the offer of a professorship.—*Breslau:* Dr. Kausch has been recognised as *privat docent* in Surgery.—*Brooklyn* (*Long Island College Hospital*): Dr. Henry H. Morton has been appointed Professor of Diseases of the Genito-Urinary System.—*Bucharest:* Dr. G. Marinesco has been appointed Clinical Professor of Diseases of the Nervous System.—*Paris:* Dr. Brissaud has been appointed to the Professorship of the History of Medicine and Surgery in succession to the late Dr. Laboulbène.

GUY'S HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes to the successful students of Guy's Hospital Medical School took place on July 7th in the theatre of the new school buildings. Mr. Cosmo Bonsor, M.P., treasurer of the hospital, presided. Mr. R. Gordon presented the scholarships, medals, prizes, and certificates awarded during the past year:—Open Scholarships in Arts: R. F. Macdonald, Bancroft School, Woodford Wells, £100; G. Hamilton, Aske's School, Hatcham, £50. Dental students: J. W. Walton, Folkestone Grammar School, £30. Open Scholarships in Science: E. H. B. Milsom, Christchurch, New Zealand, £150; F. Rogerson, Guy's Hospital, and Ivens Spriggs, private study, £30 each. Scholarship for University Students: H. S. French, Christ Church, Oxford, £50. Junior Proficiency Prizes: C. H. Robertson, £20; J. T. Hicks, £15. The Michael Harris Prize for Anatomy: C. H. Robertson. The Wooldridge Memorial Prize for Physiology: J. T. Hicks and A. E. Pakes. The Hilton Prize for Dissections (1898): C. Tessier. The Arthur Durham Prize for Dissections (first year students): A. M. Webber; senior students: C. H. Robertson and A. H. Wall. Dental Prizes, second year students (1898): P. S. Campkin; first year students: C. S. Morris. Practical Dentistry Prize: C. S. Morris. Senior Proficiency Prizes: C. T. Hilton, E. B. Dowsett, and G. N. Meachen. The Richard Bredin Prize for Clinical Study: R. H. Swan. The Golding-Bird Gold Medal and Scholarship for Sanitary Science: S. Copley. The Treasurer's Gold Medal for Clinical Medicine: G. S. Simpson; and the Treasurer's Gold Medal for Clinical Surgery: C. T. Hilton. In a brief address Mr. Gordon drew attention to the fact that Mr. Balfour, when presiding last year at the prize distribution, made an appeal for aid for the school in the matter of scientific research. That appeal had not been responded to as freely as had been hoped. Money in no stinted measure had flowed into the treasury of Guy's Hospital, but not to such an extent as to justify the governors in making special preparations for scientific research.

SUPERANNUATION ALLOWANCE.—Mr. R. Thomason, M.R.C.S. Eng., medical officer for the Dewchurch District, Hereford Union, has been awarded a superannuation grant of £71 1*s.* 8*d.*

BEDFORD COLLEGE FOR WOMEN, LONDON.—Dr. A. C. Houston has been appointed Lecturer in Bacteriology at the College. The Arnott Scholarship in Science has been awarded to Miss Lilian Marian Warwick of the North London Collegiate School. The College Hygiene Certificate has been awarded to Miss Mildred O. Power and to Miss Lucy M. Fryer.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—SUMMER SESSION, 1899.—Carmichael Scholarship: Miss M. J. Shire, £15. Mayne Scholarship: D. A. Fitzgerald, £15. Gold and Silver Medals in Operative Surgery: C. R. Boyce, gold medal; C. Myles and J. F. Peart (equal), silver medal. Practical Histology: E. Evatt, first prize (£3) and medal; A. Charles, second prize (£1) and certificate. Practical Chemistry: E. C. Byrne and J. R. H. M'Manus (equal), first prize (£2) and medal. Public Health and Forensic Medicine: J. P. Byrne, first prize (£3) and medal; E. Evatt, second prize (£1) and certificate. Materia Medica: J. S. Ashe, first prize (£3) and medal; T. A. Dillon, second prize (£1) and certificate. Practical Pharmacy: Miss J. C. Hargrave, first prize (£3) and medal; W. Ormsby, second prize (£1) and certificate. Biology: J. R. B. Buchanan and Miss J. C. Hargrave (equal), first prize (£2) and medal. The preliminary examination for the commencement of medical study will be held on Wednesday and Thursday, Sept. 27th and 28th.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—On July 5th, in the absence of Lord James of Hereford, Sir Robert Finlay, M.P., the Solicitor-General, distributed the prizes and certificates awarded during the summer session, 1898, and the winter session, 1898–99, to the students at the above school. The following is the list of awards:—Livingstone scholar: Mr. G. E. Bellamy. Huxley scholar: Mr. B. R. Bickford. University scholars: Mr. B. G. Fiddian and Mr. H. S. Gabb. Llewellyn prize (£25): Mr. B. A. Nicol. Governors' clinical gold medal: Mr. B. A. Nicol. Huxley medal (with prize of £10): Mr. W. B. Blandy. Golding prize (certificate and £10): Mr. G. E. Bellamy. Pereira prize (certificate and £5): Mr. B. A. Nicol. Anatomy (Senior): Prizes, Mr. E. Bayley and Mr. W. B. Blandy (equal). Anatomy (Junior): Prize, Mr. A. Collis; certificates, Mr. T. Mordaunt, Mr. A. J. Heydon, Mr. R. H. Heath, Mr. H. P. Fitch, Mr. R. P. Swannell, Mr. G. E. Bellamy, and Mr. T. Mitchell. Biology: Prizes, Mr. D. M. Davies and Mr. R. H. Cooper (equal). Chemistry: Prize, Mr. R. H. Cooper; certificates, Mr. G. E. Bellamy, Mr. S. G. Amoore, and Mr. C. A. Flintoff. Physiology (Senior): Prize, Mr. W. B. Blandy; certificates, Mr. E. Bayley, Mr. C. J. Mercier, and Mr. S. A. Boyd. Physiology (Junior): Prize, Mr. G. E. Bellamy: certificate, Mr. R. H. Heath. Medicine (Senior): Prize, Mr. E. H. Bonney; certificate, Mr. B. A. Nicol. Medicine (Junior): Prize, Mr. B. G. Fiddian; certificates, Mr. A. C. Ingram and Mr. H. S. Gabb. Surgery (Senior): Prize, Mr. B. A. Nicol. Surgery (Junior): Prize, Mr. A. C. Ingram; certificate (proxime accessit), Mr. H. S. Gabb; certificates, Mr. B. G. Fiddian, Mr. G. O. Lambert, Mr. J. D. Rolleston, and Mr. E. F. Ackery. Practical Medicine: Prize, Mr. A. C. Ingram; certificates, Mr. C. H. Fennell and Mr. B. G. Fiddian (equal), and Mr. B. A. Lloyd, Mr. J. D. Rolleston, and Mr. H. S. Gabb. Practical Chemistry: Prize, Mr. F. J. Pierce; certificates, Mr. G. S. Welham and Mr. C. S. Mallinson. Psychological Medicine: Prize, Mr. E. L. Lilley. Practical Midwifery: Prize, Mr. C. H. Fennell; certificates, Mr. J. W. Lawson and Mr. J. P. Candler and Mr. D. P. Chapman (equal). Midwifery: Prize, Mr. W. T. Mullings; certificate, Mr. J. P. Candler. Pathology: Prize, Mr. C. H. Fennell. Public Health: Prize, Mr. W. H. Unwin; certificate, Mr. C. T. Bishop. Therapeutics: Prize, Mr. B. A. Nicol; certificate, Mr. M. G. Hannay. Forensic Medicine and Toxicology: Prize, Mr. B. A. Nicol. Materia Medica: Prize, Mr. F. J. Pierce; certificates, Mr. W. B. Blandy, Mr. A. Camacho, and Mr. D. Bridges. In congratulating the prize winners on the success which had attended their efforts Sir Robert

Finlay referred to the presence of Professor Virchow and Lord Lister at the Huxley Lecture instituted to commemorate the connexion of the late Professor Huxley with that medical school. He impressed upon the students the importance, when they started practice, of keeping themselves in touch not only with the improvements of science, but with the great masterpieces of literature in which some phase or other of human nature was always to be found. In conclusion, he could only hope that each student who emerged from that school would endeavour to prove himself worthy of the great profession which he had adopted. A vote of thanks to Sir R. Finlay, proposed by Sir Joseph Fayrer, concluded the proceedings.

HOSPITAL FOR EPILEPSY AND PARALYSIS, PORTLAND TERRACE, REGENT'S PARK.—In taking the chair for the first time as President at the annual meeting of the Hospital for Epilepsy and Paralysis the Earl of Hardwicke dwelt on the fact that the hospital must absolutely leave the present premises in April next as the lease would then expire and would not be renewed. It was, however, impossible to contemplate the extinction of the hospital after a beneficent existence of 31 years, though its services in the study of nervous diseases would in no case die. Unless epileptics were insane they had only voluntary charity to depend upon. Canon Barker said that nervous diseases were the most lamentable of all, as they precluded self-support and were often a disqualification for ordinary hospitals. He hoped for a meeting two years hence in a new and even a better building. General Lowry said that he had visited the hospital and was greatly pleased with all he saw. It was full of patients who spoke most gratefully of their own improvement and of the care which they received. He hoped that other clergymen in the neighbourhood would follow Canon Duckworth's example with sermons and offertories for the new building fund. The necessity for moving was the fault of no one and could not have been avoided and he thought that a new hospital of not less than 50 beds would be most desirable. Lord Farquhar considered that to have, in hand or in view, £8000 out of the £16,000 which at least would be required was most hopeful. He felt that the hospital was most fortunate in its new president who, he was sure, would make all possible efforts which he himself would heartily second. 70 days was a short time for the cure of such maladies as those treated at that hospital.

Parliamentary Intelligence.

HOUSE OF LORDS.

TUESDAY, JULY 11TH.

Seats for Shop Assistants.

The Bill introduced by the Duke of WESTMINSTER for providing seats for shop assistants in England and Ireland was debated at great length at this sitting, and although opposed by the Marquis of SALISBURY the second reading was carried by 73 to 28 votes. A similar Bill with reference to Scotland passed through all its stages in the House of Commons earlier in the session, but was withdrawn in the House of Lords on notice of opposition.

HOUSE OF COMMONS.

THURSDAY, JULY 6TH.

Vaccination Prosecutions.

MR. THOMAS BAYLEY asked the President of the Local Government Board whether his attention had been called to the decision of the magistrates at the Chesterfield Borough Police-court on Thursday, June 22nd, whereby three men were each fined 5*s.* for neglecting to have their children vaccinated, besides having to pay 7*s.* costs and 20*s.* for the vaccination officer, amounting in all to the sum of £1 12*s.* each; whether this was in accordance with an instruction from the Local Government Board; and whether the course adopted by the magistrates was a legal one.—Sir MATTHEW WHITE RIDLEY, Home Secretary, replied to the question, saying: The total amount of fines and costs which the defendants were ordered to pay was in one case 32*s.*, in another 24*s.* 6*d.*, and in the third 22*s.* 6*d.* The Local Government Board did not and could not give any instructions in such a matter to the magistrates. I see nothing illegal in the manner these cases were dealt with.

Ventilation of the Metropolitan Underground Railways.

MR. WEIR asked the President of the Board of Trade, in view of the fact that the system of blow holes, for the better ventilation of the Metropolitan Underground Railways as recommended by Sir Wolfe Barry and the late Sir John Baker had proved a failure, would he state whether any steps were being taken to provide fans as a means of improving the atmosphere in the tunnels; and whether any effort was being made to introduce electric traction on these lines.—MR. RITCHIE: No, Sir, fans are not being provided on the Metropolitan Underground Railways; the companies are not prepared to admit that the blow-hole system has proved a failure. On the other hand, experiments are being made between Earl's Court and High-street, Kensington, with the object of introducing electric traction and I am informed that such experiments will be actively prosecuted.

Lead Poisoning.

MR. WOODALL asked the Home Secretary if he was in a position to state the results of the monthly examinations of women and young persons employed in processes of pottery where lead compounds were used for the six months of the current year, compared with the like period of 1898 before the examinations were instituted; and would he also say what had been the experience during the same comparative periods of other trades subject to plumbism where no such periodical examinations of the workers were required as those provided for by the Home Office Rules of last year.—Sir MATTHEW WHITE RIDLEY: Comparing the first six months of 1898 with the first six months of 1899 it appears that the number of reported cases of lead poisoning in the china and earthenware industry has diminished from 223 to 160, while as regards notification of lead poisoning generally there has been some increase in the number of reported cases. The diminution in the china and earthenware industry is probably due, in part at any rate, to the monthly medical examination.

MR. WOODALL asked the Home Secretary whether he was now able to give an analysis of the official statistics of lead poisoning, distinguishing the cases of a serious, slight, or doubtful character.—Sir MATTHEW WHITE RIDLEY: Of the 160 cases of lead poisoning reported in the china and earthenware industry 77 are classed as slight, 72 as moderate or severe, and in 11 cases the degree of severity is not stated. Out of the 160 cases 22 may be regarded as doubtful on the ground that the certifying surgeon did not consider that there were unmistakeable symptoms of lead poisoning. It must be remembered that the occupier sometimes reports cases in which a medical man has not been consulted.

Women as Councillors and Aldermen.

After a long debate the House of Commons decided by 243 to 176 votes to agree with the House of Lords in its amendment on the London Government Bill providing that women shall not be eligible for the offices of alderman or councillor in the borough councils which the Bill proposes to establish.

Cubicles for Soldiers.

In the debate on the second reading of the Military Works Bill, a measure which makes provision for the erection of barracks in different parts of the Empire, several Members spoke in support of the proposal that cubicles should be provided for soldiers, and Mr. GEORGE WYNDHAM, Under-Secretary of State for War, in the course of his reply said that the proposal had been earnestly considered by the military advisers to the War Office. It was a question, however, upon which two opinions existed, and no Government would be justified in making so important a change of policy as that involved in the provision of cubicles unless they were able to say that they were acting on the recommendation of their chief military experts. That the Government were not able to say with regard to cubicles; but they did say that they wished they could give the cubicles, and they engaged that the provision of better barrack accommodation should not proceed upon lines which would preclude the introduction of cubicles should it be decided upon hereafter.—Sir JAMES FERGUSSON has given notice that he will raise the question again on the report stage of the Bill.

FRIDAY, JULY 7TH.

Vaccination Questions.

MR. LOGAN asked the President of the Local Government Board if his attention had been directed to the report of a vaccination prosecution before the justices sitting at Southam, Warwickshire, from which it appeared that although the public vaccinator had himself certified that the child who formed the subject of the prosecution was weak and suffering from rickets that officer insisted upon his right to vaccinate it and expressed his intention of disregarding the instructions of the Local Government Board on that point; and if the Local Government Board proposed to take any steps to secure respect for their instructions in the district in question.—MR. CHAPLIN: My attention has been directed to certain newspaper reports of the case referred to. The facts are as stated as regards the certificate given by the public vaccinator, but it was not a certificate of postponement of vaccination under the Vaccination Acts. Indeed, the public vaccinator is reported to have stated in court that he considered the child a fit subject for vaccination. He absolutely denies having expressed any intention of disregarding the instructions of the Local Government Board. He only claimed the right to use his discretion as to what constituted good health in relation to vaccination and I see no reason to interfere with this discretion.

MR. STEADMAN asked the Home Secretary whether his attention had been called to the case of Thomas H. Rich, who was summoned before the Ludlow bench of magistrates on June 12th under the Vaccination Acts and who pleaded in defence that the public vaccinator had not given notice of his visit in accordance with Article 1, Section 3, of the Vaccination Act of 1898, but that the said public vaccinator attempted to vaccinate the child by force against the wish of the mother; whether he would inform the public vaccinator of Craven Arms that he had exceeded his duty in attempting to vaccinate against the wish of the parent and without giving the 24 hours' statutory notice; and would he cause the fine and costs to be returned to the said Thomas H. Rich.—Sir MATTHEW WHITE RIDLEY: According to my information the defendant was charged with having neglected to get his child vaccinated; he admitted the fact, and also admitted that he had received notice requiring vaccination from the public vaccinator. The public vaccinator emphatically denies that he attempted to vaccinate the child by force against the parent's wishes. Under these circumstances I see no reason for any action on my part such as is suggested in the question.

Lead and Phosphorus Poisoning.

At this sitting of the House the vote for the expenses of the Home Office was taken and upon it there was a long debate with regard to lead and phosphorus poisoning, and strong representations were made to the Home Secretary to introduce legislation.—Sir MATTHEW WHITE RIDLEY replying to the various speeches, said he had proceeded upon lines which appeared to him the most reasonable and fair—namely, to send the reports to the various manufacturers concerned, who after all ought to be consulted and considered, and to ask them what they could do to meet the suggestions of Dr. Thorpe and Dr. Oliver. He submitted

that the best way for a Minister to secure good administration of the law was to carry with him as far as he possibly could the goodwill of those with whom he had to deal. He had received answers from the manufacturers, and he was about to have another conference with them in a few days and he had every hope that they would together be able to frame special rules which would very much improve the condition of the trade. As far as the Home Office view was concerned they would not be indisposed to do the best they could to support the views of the experts in this matter. The very great difficulties of the phosphorus business had been referred to and he did not see how without adequate consideration of the report and reference to the manufacturers special rules could have been devised. A good deal was known of the facts last year, but only in a tentative way. The reports had, however, added a great deal to their knowledge and this circumstance ought to induce many manufacturers to enter into a new arrangement which would be more satisfactory. The question of arbitration and special rules was a difficult one, because it was not easy to secure the passing of special rules which should be fair to the various industries and which ought to be adopted by the working men. He hoped, however, that he would be able to propose legislation which would materially alter the present state of the law. A Bill had been prepared many months ago by those responsible for the administration of the Factory Acts dealing, among other points, with special rules, but the fates had been against him. He therefore wished to disabuse the minds of hon. Members of the idea that the Government had no idea of introducing legislation on the subject this session. In the course of the present year he had been able to enter into successful negotiations with manufacturers, especially in the white lead industry, to secure special rules which he hoped would be satisfactory to that trade, and which might have the effect of inducing others to accept similar conditions. It was impossible that he should give a definite promise now to introduce a Factory Bill next year; but it would be a matter of great disappointment to him if he found himself unable to deal with the particular question to which he had referred at an early period next session. Something had been said about the reports as to fritted lead and phosphorus. Everybody would admit that, surrounded as they were with difficulties, yet special rules might be developed out of these reports which would be likely for the time being to effect very considerable results. He was asked to agree to an inquiry in reference to the file cutting and grinding trades, but he would not for a moment propose to deal with these industries without communicating with those interested on both sides of the question. His desire was that the power to make rules should be much more with the Secretary of State than at present, subject to a fair opportunity being given to those who were concerned of being heard before an impartial authority. He did not wish to be understood to have promised that there should be some special provision in his proposed Bill dealing in so many words with such questions as the employment of young persons, the use of raw lead, of phosphorus, and so forth. What he did say was that he intended specifically to take powers to make rules in regard to those matters because it was very doubtful whether such rules could be made under the present law.

MONDAY, JULY 10TH.

Assaults on Medical Men in the East-end.

Mr. PICKERSGILL asked the Home Secretary whether his attention had been called to the letter of Mr. Stonham of Albert-square, Commercial-road, in which he stated that he was attacked and robbed at 4 o'clock in the afternoon, and that recently another medical man was similarly attacked and robbed in the main thoroughfare about noon, and in which he complained that the police force in the East-end of London was undermanned; and whether, as the ratepayers of this quarter of London contributed their quota towards the maintenance of the Metropolitan Police he would give them the same measure of protection as that which was accorded to the West-end.—Sir MATTHEW WHITE RIDLEY: Equal regard is paid to the requirements of the East of London as to any other part of the metropolitan police district. In both the two particular cases of assault mentioned in the question it appears that offenders have been arrested and brought to justice. I have, however, called the attention of the Commissioner of Police to this matter.

Vaccination Penalties.

Mr. PICKERSGILL asked the Home Secretary whether his attention had been called to the heavy penalties—namely, fines of one guinea each, in addition to costs, imposed by the Buckinghamshire magistrates at Marlow on Friday last upon two labouring men for the non-vaccination of their children; and whether he would consider these cases with a view to the mitigation of the penalties so as to avoid the committal of two respectable men to prison.—Sir MATTHEW WHITE RIDLEY: I have fully inquired into the circumstances of this case and the position of the defendants and find no ground for intervention.

TUESDAY, JULY 11TH.

The Increase of Cancer.

Sir CHARLES CAMERON asked the President of the Local Government Board whether his attention had been called to the fact that the number of deaths registered as from cancer per million of the population of the United Kingdom had within the past 30 years more than doubled; and, whether, in view of this increase, he would consider the expediency of appointing a Commission to inquire into the subject for the purpose, if possible, of devising means whereby the frequency of the disease might be diminished.—Mr. T. W. RUSSELL (for Mr. CHAPLIN): The attention of the Local Government Board has been called to the large increase in the number of deaths from cancer and they have, as opportunity has arisen, caused scientific research to be made into the natural history and causes of cancer, but the President of the Local Government Board is advised that in the present state of knowledge on the subject no useful purpose would be likely to be served by the appointment of a Royal Commission.

Sir CHARLES CAMERON asked the Under Secretary of State for Foreign Affairs whether his attention had been called to the fact that the increase in the number of deaths from cancer in the State of New York had induced the legislature of that State to endow a laboratory at Buffalo for the study of that disease; and if he would request the British Embassy at Washington to procure copies of any official reports on the subject of the institution of that State laboratory and its working.—Mr. BRODRICK: The attention of the Foreign Office has not previously been called to this fact, but I shall have much pleasure in procuring the desired information from Her Majesty's Embassy at Washington.

The Employment of Locum-tenents.

Mr. YOUNG asked the Chief Secretary to the Lord Lieutenant of Ireland whether it was the intention of the Local Government Board of Ireland to apply Section 55, sub-section (2) of the Local Government (Ireland) Act, in respect of the salaries of medical practitioners who act as locum-tenents during the annual vacation of each dispensary officer, in order that a recoupment of one-half of those salaries may be received in the same manner as half the salaries of the permanent medical officers is recouped.—Mr. GERALD BALFOUR: The reply to this question is in the negative. It has never hitherto been the practice to allow recoupment in respect of the remuneration paid to a person employed as locum-tenent for a medical officer when on leave of absence.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ARMISTEDT, J., jun., has been appointed Analyst by the Kinsale Board of Guardians and District Council.

BARROW, GEORGE A., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.

BLOOD, J. F., M.D., Surgeon-Major I.M.S. (retired), has been appointed Surgeon to the Birkenhead Borough Hospital.

BRODIE, F. CARDEN, M.B., B.S., has been appointed Admiralty Surgeon and Agent at Sandown, Isle of Wight.

CAYLEY, F. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Assistant Medical Officer for the King's-road Workhouse of the Parish of St. Pancras, London, vice W. M. Sturrock, resigned.

DRAKE, R. C., L.S.A., has been appointed Medical Officer to the Tudhoe Sanitary District of the Durham Union, vice J. C. Potter, resigned.

DU BUISSON, R. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Dewchurch Sanitary District of the Hereford Union, vice R. Thomason, resigned.

FARRANT, SAMUEL, Surgeon Lieutenant-Colonel, M.R.C.S., West Somerset Yeomanry, has been appointed to the Medical Charge of the Troops at Taunton.

GARMAN, F. W., has been appointed Assistant House Surgeon to the Dental Department at Guy's Hospital.

GASS, R. B., M.B., C.M. Edin., has been appointed Medical Officer to the Heysham Urban District Council.

GODWIN, G. L., L.S.A., has been appointed a Deputy Public Vaccinator, Worksop.

HALL, ARTHUR J., B.A., M.B. Cantab., M.R.C.P., has been appointed Professor of Pathology in University College, Sheffield, vice Duncan Burgess.

HARRISON, H. F. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Fulham Union.

HAYDON, HILLYARD WILLIAM, L.R.C.P. Lond., L.S.A., M.R.C.S., has been appointed Medical Officer of Health by the Wadebridge Urban District Council, vice F. G. Stewart, deceased.

HORNE, W. JOBSON, M.B., B.C. Camb., has been appointed Hon. Surgeon to the Metropolitan Ear, Nose, and Throat Hospital, Fitzroy-square, W.

LAKE, RICHARD, F.R.C.S. Eng., has been appointed Hon. Surgeon to the Metropolitan Ear, Nose, and Throat Hospital, Fitzroy-square, W.

LANSDOWN, C. E., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the Hospital for Sick Children, Cheltenham.

LAWRENCE, H. GWYNNE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Chepstow, vice E. P. King, resigned.

LAWSON, THOMAS CORNELIUS, M.R.C.S., L.S.A., has been appointed Medical Officer for the Coleford District by the Frome Board of Guardians.

LEAF, CECIL H., M.A., M.B. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Cancer Hospital, Fulham-road, Brompton.

MORISON, F. H., M.D. Edin., D.P.H. Irel., has been appointed Medical Officer for West Hartlepool, vice Samuel Gourley, resigned.

OLVER, S. H., L.D.S. Eng., has been appointed House Surgeon to the Dental Department at Guy's Hospital.

PALMER, P. H. HAYES, L.D.S. Eng., has been appointed House Surgeon to the Dental Department at Guy's Hospital.

PRICE, HENRY J., F.R.C.S. Eng., has been appointed Medical Referee to the Railway Passengers' Assurance Company for the District of Maldon, Essex, vice E. P. Gutteridge, resigned.

RECORDON, R. B., has been appointed Assistant House Surgeon to the Dental Department at Guy's Hospital.

REID, J., M.D., C.M. Glasg., has been appointed Medical Officer for the No. 1 Sanitary District of the Fulham Union.

ROWLETT, ALFRED E., L.D.S. Eng., has been appointed House Surgeon to the Dental Department at Guy's Hospital.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ADELAIDE HOSPITAL, South Australia.—Two Junior Resident Medical Officers. Salary £110 per annum, with board, &c. Applications to the Hon. J. A. Cockburn, M.D., Agent-General for South Australia, 1, Crosby-square, Bishopsgate-street, London, E.C.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £50, with board, residence, and laundry. Apply to the Hon. Sec., 20, Chapel-street, Liverpool.

BOROUGH ASYLUM, Portsmouth.—Junior Assistant Medical Officer. Salary £120 per annum, increasing by three equal annual increments to a maximum of £150, with board, lodging, and washing.

BRADFORD POOR-LAW UNION.—Resident Assistant Medical Officer for the Hospitals and Workhouse of the Union for one year. Salary £100, with prescribed rations, apartments, and washing. Apply to the Clerk to the Guardians, 22, Manor-row, Bradford.

BRADFORD ROYAL INFIRMARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence. Also Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

CARDIFF INFIRMARY.—Assistant House Physician for six months. Salary at the rate of £60 per annum, with board, washing, and apartments.

CHESTER GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £60 per annum, with residence and maintenance in the house.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for twelve months. Salary £40 per annum, with board, residence, and washing.

DURHAM COUNTY HOSPITAL, Durham.—House Surgeon for one year. Salary £100 per annum, and board and lodging.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley, N.B.—Junior Assistant Medical Officer. Salary £100 a year, with furnished rooms, board, laundry, and attendances.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging. Wines, spirits, beer, &c., not found.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. — Assistant Resident Medical Officer. Salary £50 per annum, with board and residence. Also Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon to out-patients for six months.

HOSPITAL OF ST. FRANCIS, 145, New Kent-road, London.—Assistant Surgeon and Assistant Physician.

LEEDS GENERAL INFIRMARY.—House Physician for six months. Board, lodging, and washing provided.

LONDON LOCK HOSPITAL, Harrow-road, W.—House Surgeon to the Female Hospital. Salary £50 per annum, with board, lodging, and washing.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried. Salary £150 a year, with apartments, board, attendance, and washing.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—Honorary Assistant Physician.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers, one or more, at the New Grove Hospital, Tooting, S.W., unmarried. Salary £160 per annum, rising at the discretion of the Hospitals Committee by £20 to £200 per annum, with board, lodging, attendance, and washing, subject to statutory deductions. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £40 per annum, with board, attendance, and washing.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £85 per annum, with board, washing, and residence. Also Locum Tenens. Three guineas.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar.—Assistant and Second Assistant House Surgeons. Salary each £65 per annum, with board and residence.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY, AND THE GENERAL HOSPITAL AND SEAMEN'S INFIRMARY.—Resident Medical Officer, unmarried. Salary £100 per annum, with furnished apartments, board, and attendance. £10 allowed for substitute during annual holiday.

ROCHDALE INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £90 per annum, with board, residence, and washing.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 per annum, with furnished quarters, board, washing, and attendance.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon for six months. Salary at the rate of £30 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Extra Honorary Surgeon.

SOMERSET AND BATH LUNATIC ASYLUM, Wells, Somerset.—Junior Assistant Medical Officer, unmarried. Salary £120. Annual advances of £10 up to £150.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, London.—Honorary Physician.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Junior Assistant Medical Officer, unmarried. Salary commences at £120 per annum, rising £20 yearly to £160, with furnished apartments, board, &c.

SURREY COUNTY ASYLUM, Brookwood, near Woking.—Temporary Assistant Medical Officer for about four months. Salary at the rate of three guineas per week, with apartments and all found. Apply to the Medical Superintendent.

TORBAY HOSPITAL, Torquay.—House Surgeon. Salary £80 per annum, and £5 5s. for lectures to the nurses. Board, lodging, washing, and attendance provided (wines, spirits, and beer excepted).

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST SUSSEX COUNTY ASYLUM, Chichester.—Junior Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with furnished apartments, board, attendance, and washing.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Second House Surgeon, unmarried. Salary £60 a year, with board and residence and 10s. a month for washing.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon for six months. Terms £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BROCK.—On July 6th, at Adelaide-road, N.W., the wife of J. H. E. Brock, M.D., D.P.H., F.R.C.S., of a daughter.

CAPES.—On July 6th, at Grove-lane, Denmark-hill, S.E. the wife of Robert Capes, of a daughter.

CUTTING.—On July 4th, at Stalham, Norfolk, the wife of Ernest B. Cutting, M.R.C.S., L.R.C.P., of a daughter.

FALLA.—On July 4th, at Adelaide Lodge, Jersey, the wife of Walter Falla, M.R.C.S., L.R.C.P., of a daughter.

ODELL.—On July 4th, at York House, Hertford, the wife of Robert Odell, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

ROYDEN.—On July 5th, at Burgh St. Margaret, near Great Yarmouth, the wife of William Royden, M.A. Cantab., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

ALLEN—DONALD.—On July 8th, at Johnstone, William Allen, M.B., C.M., Midhurst, Sussex, to Catherine Shearer, daughter of the late James Donald, Johnstone.

BRAINE-HARTNELL—BARKER.—On July 7th, at Havering, Essex, George Marcus Panton Braine-Hartnell, M.R.C.S., L.R.C.P., Superintendent of the Worcester County Asylum, Powick, to Florence Edith, daughter of the Rev. J. C. Barker, M.A., vicar of the parish.

CORFIELD—BURR.—On July 5th, at St. Stephen's, Clapham-park, Edward Carruthers Corfield, M.R.C.S., L.R.C.P. & L.S.A. Lond., of Gothic House, Upper Tooting, to Helen Beatrice, only daughter of William Barnett Burn, M.D. Lond., of Beechwood, Balham.

JENNINGS—TOWARD.—On July 6th, at All Saints, Margaret-street, W., Richard Edward William Jennings, M.R.C.S., L.R.C.P. Lond., to Eileen Elizabeth, second daughter of the late William Edmund Toward of Newcastle.

JOHNS—ADDINGTON.—On July 5th, at the parish church, Tuxford, Notts, Archibald Tisdall Johns, M.D., of Acacia Lawn, Banbury, Oxon, to Nancie Addington, youngest daughter of Mr. P. Addington of Tuxford.

PORRITT—MCKENZIE.—On Monday, May 22nd, 1899, at the Church of St. John the Evangelist, Featherston, Wairarapa, N.Z., by the Rev. A. M. Johnson, M.A., assisted by the Rev. Thomas Porritt, M.A., the father of the bridegroom, Ernest Edward Porritt, M.B., C.M., F.R.C.S.E., third son of Rev. Thomas Porritt, Featherston, to Elizabeth McKenzie, only daughter of the late Dr. McKenzie, Hampstead-road, London.

PRIOR—PEILE.—On July 5th, at the Friends' Meeting House, Pardshaw, Samuel Prior, M.B., C.M. Glasg., of Moldgreen, Huddersfield, to Emma Peile, second daughter of the late John Peile, The Beeches, Rogerscale.

RICHARDS—TODD.—On July 6th, at St. Peter's, Old Brampton, Derbyshire, Harold Meredith Richards, M.D., youngest son of David Richards, Cardiff, to Mary Cecilia, eldest daughter of the late Walter John Todd of London.

ROSS—LOWE.—On July 5th, at the parish church, Ecclesfield, near Sheffield, by the Rev. Alfred Gatty, D.D., assisted by the Rev. J. E. Gofton, M.A., James Alexander Ross, M.B., C.M. Aberd., St. Mary's, Penistone, Yorks, eldest son of the late John Ross of Aberdeen, to Annie, third daughter of Robert Lowe, Shire Green, near Sheffield.

SHEPHERD—BRUSHFIELD.—On July 6th, at St. Luke's Church, Balham, Timothy Arundel Jordan Shepherd, M.R.C.S., L.S.A., of Moldgreen, Huddersfield, to Rosina Mary, eldest daughter of Thomas Nadauld Brushfield, M.D., F.S.A., of Budleigh-Salterton, Devon.

WALLIS—MILNES.—On July 11th, at St. Martin's Church, Werrington, Albert William Wallis, M.R.C.S., of Brentwood, Essex, to Ada Fannie, eldest daughter of the late William Stert Milnes, of Yeolmbridge, near Launceston, Cornwall.

WEEKES—HICKS.—On July 5th, at Christ Church, Streatham-hill, by the Rev. Walter Hicks, M.A., Lincoln Diocesan Missioner, brother of the bride, assisted by the Rev. C. S. Nicholl, M.A., vicar, Henry Holman Weekes, M.D., M.R.C.S., L.R.C.P., of Mansion House, Old Brompton, Kent, son of the late Dr. Henry Weekes, J.P., C.A., to Constance, daughter of the late Sir Francis Hicks, J.P., D.L., of Oakfield, Streatham, S.W.

WILLIAMS—BOWEN.—On July 4th, at St. Peter's Church, Llanelly, by the Rev. T. B. Williams, M.A., vicar, Morgan J. Williams, M.R.C.S., L.R.C.P. Lond., of Victoria, Rhodesia, and Greenfield House, Llanelly, to Gertrude, second daughter of S. B. Bowen, Esq., of Highfield, Llanelly.

DEATHS.

BAILEY.—On July 8th, at his residence, Kelmscott, Bromley, Kent, George Hewlett Bailey, M.R.C.S., &c., late of 43, Queen Anne-street, W., aged 71 years. Friends please accept this the only intimation.

CONGREVE.—On July 5th, at Hampstead, Richard Congreve, M.A., Honorary Fellow of Wadham College, Oxford., M.R.C.P. Lond., aged 80 years.

NASON.—On July 10th, at Stratford-on-Avon, Edward Nason, M.R.C.S., aged 75 years.

NICHOLSON.—On July 6th, at Coburg, Gilbert de Poulton Nicholson, M.D.

RICHARDS.—On July 5th, at Churnett-street, Manchester, suddenly, Arthur Izod Richards, M.R.C.S., in his 37th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE GIVING OF MEDICAL CERTIFICATES.

WE have received the following letter from a correspondent which touches upon a question of great and growing importance to medical men:—

SCHOOL BOARD CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—I am constantly called upon to write certificates exempting children from school attendance through illness, and in the majority of cases the parents are too poor to pay for them. Would you kindly tell me if I can make a claim against the School Board authorities? I find the writing of these and similar certificates a nuisance. What with these and death certificates, for which we get no pay, it appears to me the profession does a great deal of writing for nothing. I am, Sirs, yours faithfully,

July 8th, 1899. J. G. B.

Of course our correspondent cannot make a claim for fees against the School Board. He is asked by his own patients to give these certificates (for it is clear that he cannot certify to the sickness of persons whom he has not attended), and his own patients are presumed to pay him for his services. In reality it is very doubtful if any large proportion of his patients pay him adequately, especially those of the class whose children attend the Board schools; but it has always been the habit of the medical profession to make no charge for medical certificates either in the case of wealthy persons who might well pay for them or of poor persons who cannot even remunerate the practitioner for his attendance.

The giving of medical certificates in one form or another has now become a serious tax upon medical men and the time may soon come when the profession will decide that it is unjust of the public to expect from it so much unpaid labour. The house physicians and house surgeons of many of our hospitals waste valuable hours that might be better employed in the proper work of their institutions signing various papers to be shown to employers, school boards, clubs, and in all sorts of directions. The nuisance in some instances has become so grave that we believe the authorities of certain hospitals have legislated upon it, while medical men in considerable numbers have thought, as our correspondent "J. G. B." thinks, that they were expected to do a great deal of clerical labour for nothing. Nor are the public grateful to the medical profession for being so open-handed with certificates—documents which we may be quite sure the legal profession would never sign without a fee. On the contrary we have had to record in our columns several times the unsatisfactory manner in which school boards in different localities have disregarded medical certificates, calmly suggesting that the sick children should be visited by some medical man appointed by the board. A case has also come under our notice where a house surgeon was asked by his patient to put his initials and the date of his visit in a certain column of an elaborately ruled card. The house surgeon, busy in more urgent matters, placed his initials in the wrong space and received a letter from the sick club instructing him to be more careful in the future—exactly as though he were the obliged person in being permitted to initial such documents.

As a matter of fact, the public does not value what it gets for nothing. We see it every day. The lay officials of medical aid associations parade the low estimate in which they hold medical officers whose services they buy at starvation prices. The lay officials of the St. John Ambulance Association, as we take occasion this week to say elsewhere, treat their examiners with scant courtesy because they can get medical men to act for them gratuitously. The main reason why a cheap jibe is always forthcoming in the law courts against medical certificates is because medical certificates are given in return for no fees. And surely if a death certificate were a document for which a reasonable payment had to be made no registrar would accept the certificate of an unqualified practitioner or a midwife. This is now, we are glad to say, not common, but until recent times it was quite usual, and several dangerous quacks of the herbalist order have stated in coroners' courts their disappointment that their death certificates should be considered no longer valid. Work that is given away is not appreciated and medical men should remember this. We are not advising a universal policy of grab and extortion, but we do say that it is the duty of medical men to remember that they may obtain the fine sensation of being above pecuniary considerations at the expense of those of their professional brethren who are not so fortunate as to be able to indulge their no less generous instincts.

"AUNT KATE'S MOTHER'S GUIDE."

A LITTLE pamphlet under the above title which has been sent to us would, we are sure, rejoice the heart of Mr. Barry Pain who writes for that amusing publication, "Halfpenny Home Blitherings." The work, we are informed, has been designed specially for young mothers. "..... It tells them how to treat the little stranger from the day of his or her arrival." Aunt Kate, however, commences by giving some advice to the young mother before the arrival and among other aphorisms she says, "Avoid all worry and care. Let the surroundings be pleasant and the spirits tranquil." An admirable piece of advice and one which we should like to follow even though we were not expecting a little stranger. Perhaps Aunt Kate will kindly tell us how her precept is to be followed. So far as we can judge, *the* panacea, in Aunt Kate's opinion, for every ill is a rectal injection. On looking at the index of diseases and remedies we were somewhat startled to see a heading "Bladder Jumbles," a complaint, however, which reference to the text showed should be "Bladder Troubles." We must confess to being puzzled by Aunt Kate's position. With regard to diphtheria she rightly says, "In all cases the wisest course is to send for a physician." But for ear troubles nothing but hydropathic treatment is indicated. "A suppurating or discharging ear will be cured by the same treatment as earaches," she says. Now every medical man knows that aural suppuration may be indicative of the very gravest mischief which, unless promptly treated by operation, is practically certain to result fatally. We have no hesitation in saying that Aunt Kate's advice is in many cases not only silly but mischievous. She states that she would not for a moment dissuade anyone from calling in skilled medical advice, yet she gives instruction for treating fevers and other diseases, instructions which can only be given for the use of those who do not call in a medical man. Aunt Kate seems to think that all a medical man can and does do is to give drugs—a conception which is of course false. The use of a medical man is first to ascertain what is the matter with the patient and then to put him in the most favourable position for getting well. Take, for instance, the case of an intussusception. Aunt Kate's favourite remedy, the enema, may be tried, but in a number of cases operative interference is necessary. The fault of all such crude amateur advice as that of Aunt Kate (and we include the "skilled colleagues" who direct the Health Without Medicine column in the *People's Journal*) is that it gives both too much and not enough. The advice is just sufficient to make people think they know when they do not and not enough to enable them to avoid harm. Sir John Leng, under whose auspices Aunt Kate holds forth, is a hard-headed, sensible Scotsman and we think it a pity that he should allow such feeble stuff to appear in a publication owned by himself.

A QUEER TESTIMONIAL.

WE believe that a morning paper, in an article published on July 7th, has designed to do honour to a member of the medical profession, but the heading of the article, which we reproduce, is a little startling.

WHAT CAUSES CANCER?

ENGLISH DOCTOR'S GREAT ACHIEVEMENT.

We doubt if the "English doctor" will value highly this testimony to his work. Indeed we have pleasure in publishing in another column Mr. Lambert Lack's very proper disclaimer and explanation.

A QUESTION OF FEES.

To the Editors of THE LANCET.

SIRS,—There has been a question raised at the last meeting of the board of guardians of this town, of which I am a member, as to what is the proper fee which a medical man can charge for attendance at a police-court to give evidence in support of a prosecution of anti-vaccinators. I moved and got the question deferred in order that inquiries might be made as to what fee a medical man can legally charge. In this instance there were five prosecutions and the medical man charged 10s. 6d. in each case for giving evidence. I myself consider that he was right in charging for each single case or at least he can do so legally. I shall be glad if you or your readers will kindly inform me whether he can do so and what he is legally entitled to charge.

I am, Sirs, yours faithfully,

East Grinstead, Sussex, July 1st, 1899. R. WHITEHEAD.

"THE LYMPH OF THE NATIONAL VACCINE ESTABLISHMENT."

To the Editors of THE LANCET.

SIRS,—Your correspondent "P.V." writes to you in THE LANCET of July 8th asking other public vaccinators to let him know through THE LANCET their experience with the lymph issued by the Local Government Board. I have myself vaccinated 1890 cases this year with this lymph, so I have had a good opportunity of testing its character. I have had much better success than "P.V.," but during this hot weather failures, partial and complete, have been more numerous than I could wish; but out of the whole number I have had only about two dozen complete failures which have occurred in two or three separate supplies of lymph. As one of these lots was handed to me at 2 P.M. after having left the office about 16 hours and was about as hot as a freshly baked roll on delivery failure to some degree was to be expected. I keep the lymph cool, taking only a few tubes with me which I hold in my hand as little as possible, and on taking one of these tubes for vaccinating, before cutting off the ends I shake it well so as to mix

the contents thoroughly. I would advise strongly that this be done as I am convinced that much of the failure arises from the germs adhering to the side of the tube and the clear supernatant fluid being alone blown on to the arm. Many of those vesicles which appear small on the eighth day develop afterwards into fair-sized ones. For my part I should like public vaccination to be discontinued during the months of July and August, but it might be generally disadvantageous were such a proposal to be universally carried out.

I am, Sirs, yours faithfully,

July 11th, 1899. G. A. MISKIN, M.D. St. And.

To the Editors of THE LANCET.

SIRS,—I am very pleased to give "P.V." my experience in the matter of the vaccination lymph supplied by the Local Government Board, his description of the results obtained by him so exactly tally with my own experience. What was first supplied was not only satisfactory but invariably successful. I now hardly expect a case to have taken in all places and have vaccinated children three times with practically no result. As I have now vaccinated over a thousand and never met with such ill success and never had to certify a case as insusceptible, I cannot but put the failure down to the lymph. I have just written to the chairman of the Board of Guardians of of Marlborough for leave to buy lymph at some more certain source. Making four journeys for nothing because of the ill-success of the Local Government Board in obtaining proper lymph—journeys possibly of five miles out—is no joke. I should not say anything, though, for there is the shilling for each case on the list. 40 miles for one shilling! As to the second question, that of whether a public vaccinator can register as successful a case in which but one vesicle takes, I consider that we are only asked to aim at getting four vesicles, but that four vesicles are not essential to obtaining the grant, unless it be considered that by using the Government lymph as at present supplied one has not honestly endeavoured to obtain the result.

I am, Sirs, yours faithfully,

Marlborough, July 11th, 1899. O. C. MAURICE.

To the Editors of THE LANCET.

SIRS,—In answer to the letter of "P.V." in THE LANCET of July 8th as to the reliableness of the National Vaccine Establishment lymph allow me to say that of 50 cases vaccinated by me in four places since January last all were successful except one which resulted in only three places. I first wash the arm with carbolic soap, cleanse that off and dry, put the lymph on in four places, scarify over those, and then rub well in with the blunt end of the vaccinifer, then I wait a few minutes, and then wrap up the arm in a sal alembroth wool bandage and give orders for it to be left until I come again.

I am, Sirs, yours faithfully,

ERNEST TREDINNICK.

Craven Arms, Shropshire, July 9th, 1899.

P.S.—The only objection I have to National Vaccine Establishment lymph is the extra correspondence which it entails.—E. T.

To the Editors of THE LANCET.

SIRS,—Permit me to support "P.V." in his complaint regarding the above in THE LANCET of July 8th. Like him I have of late had several complete failures and many cases which have resulted in one or two vesicles. As this complaint is of recent origin and as I have heard it made by other public vaccinators I am satisfied that it is entirely owing to some falling off in the quality of the lymph, the potency of which is sometimes attenuated to the vanishing point, so that some of the tubes contain practically nothing but glycerine. This may be due either to the imperfect admixture of the lymph with the glycerine, or to the entire disappearance of the vaccine microbes through its action. But whatever be the cause of this non-activity it is very annoying to the public vaccinator, who has surely odium enough to bear and work enough to do without having to vaccinate children two and sometimes three times over—always under protest—and at the risk of being refused a second operation, as I have been, and thus getting nothing for his trouble. I find that the public are taking kindly to the new regulations and that parents who formerly objected to vaccination are now "coming into line." Surely, therefore, we have a right to expect that the Local Government Board will see to it that we are supplied with lymph which is as dependable as to its potency as it now is with regard to its purity. I am, Sirs, yours faithfully,

July 10th, 1899. P.V. No. 2.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent in THE LANCET of July 8th so far I have found the lymph issued by the National Vaccine Establishment to yield excellent results. I presume that your correspondent uses it as soon as he gets it, and in that case in order to produce four groups of vesicles I suggest (1) that the lancet should be quite cold after its disinfection before using, and (2) that the lymph should be blown on to a glass slide and then well mixed with the point of the lancet before it is put on the arm. I am, Sirs, yours faithfully,

July 8th, 1899. P.V. No. 3.

To the Editors of THE LANCET.

SIRS,—My experience with the National Vaccine Establishment lymph tallies exactly with that of "P.V." in THE LANCET of July 8th. It is certainly some comfort to know that others besides oneself have poor results with it. At first I had every reason to be satisfied with my results, but I have found it on the whole so uncertain that I have now ceased using it and vaccinate only with Chaumier's lymph as supplied by Roberts and Co., of New Bond-street. My figures comprising the results with the National Vaccine Establishment lymph and Chaumier's lymph are so instructive that I give them. Since Jan. 1st I have vaccinated in all 265 times. Using National Vaccine Establishment lymph I made 762 insertions and had as a result 609 vesicles, some so small and ill-developed as to be hardly worthy of the name. With the National Vaccine Establishment lymph I had nine complete failures. Using Chaumier's lymph I made 233 insertions and had resulting 221 well-formed vesicles. Of course the item of expense must be considered, but I find that it does not cost more than from one penny to three halfpence to use Chaumier and there is no doubt that the results fully justify that. I find that the most reliable lymph I had from the National Vaccine Establishment was sent me from March 13th to about April 16th, for between those dates I made 180 insertions with it and had 171 vesicles. This, however, only makes the total figures seem the worse. "P.V." should certainly register as successful any case in which even the smallest vesicle results, taking care, though, to mention in the column for "Remarks" that the vesicles were "modified."

I am, Sirs, yours faithfully,

July 7th, 1899. P.V. No. 4.

FORMALIN INHALATION IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Formalin inhalation has been advocated in the treatment of phthisis. It is a 40 per cent. solution of formic aldehyde. Can any of your readers inform me what dilution of this solution it is safe to use, as the odour of "formalin" is accompanied by great irritation in the respiratory tract?

I am, Sirs, yours faithfully,

Leicester, July 11th, 1899. J. HEADLEY NEALE.

"EUCAINE."

To the Editors of THE LANCET.

SIRS,—I should be much obliged if your readers can give me some information as to the best way of using eucaine as a local anæsthetic, especially as regards the dose (maximum and minimum), time, method, strength, &c. I am, Sirs, yours faithfully,

July 10th, 1899. H. L. H.

VAN ARSDALE'S TREPHINING APPARATUS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me who the maker of Van Arsdale's trephining apparatus is, or where I can procure the same either in London or abroad? I am, Sirs, yours faithfully,

July 7th, 1899. P.

"A CASE OF PROCIDENT UTERUS TREATED BY QUININE INJECTION": ADDENDUM.

IN our issue of June 24th we published a clinical note under the above heading. The writer, Dr. F. Aikman, asks us to say that the credit of recommending the injection of solution of quinine into the broad ligament for procidentia uteri belongs to Dr. J. Inglis Parsons.

A Country Practitioner.—The paragraph is not correct though it may become so. A conference is to be held between the representatives of the friendly societies and of the profession. Until this conference has been held it is premature to say that any scale of prices "meets with the general approval of practitioners."

Ambition.—We recommend the combination of M.D., M.R.C.P., as the same reading will be necessary for both examinations. The M.D. in question is not very difficult to obtain, but it is a good degree held by many British practitioners of high standing.

Ufé, Brixton-road, S.W., writes:—Can any professional brother recommend a home for an epileptic—male, aged 17 years—whose friends can pay a guinea a week?

A. C.'s questions are too general for a definite answer. If he will state the particular facts of the case on which he wants information we will attempt to supply it.

Medicus.—We have made inquiries in one or two respectable places and are informed that the security would be generally held insufficient.

Surgeon.—We cannot find any reference to the operation in a magazine. Is not our correspondent able to consult a reference library?

Nauheim is recommended to communicate with the medical officer at the Sidmouth Bathing Establishment.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Isle of Wight Herald, Daily Chronicle, Western Mail, Daily Telegraph, Eastern Daily Press, Pioneer Mail, Times of India, Scotsman, Citizen, Liverpool Daily Post, Architect, Builder, Building News, Leeds Mercury, Brighton Gazette, Star, Sun, Bristol Mercury, Temperance Chronicle, Yorkshire Post,*

Manchester Guardian, Midland Evening News, Washington Evening Star, Dundee Advertiser, Newcastle Chronicle, Birmingham Post, Sussex Daily News, Madras Times, Radnorshire Standard, Weekly Budget, Sunderland Morning Mail, Sanitary Record, Mining Journal, Hertfordshire Mercury, Morning Leader, Herts Advertiser and St. Albans Times, Reading Mercury, City Press, Taunton Echo, British Realm, Bath Herald, Down Recorder, Local Local Government Chronicle, Surrey Advertiser, Local Government Journal, London Argus, St. James's Budget, Loughboro' Examiner, Nature, Public Opinion, Coventry Mercury, Glamorgan Free Press, Stirling Journal, Sydney Mail, Royal Cornwall Gazette, Suffolk Times, Catholic Times, Enfield Observer, Hereford Times, West London Observer, Hampshire Telegraph, Lancaster Guardian, Oundle Guardian, Salisbury Times, Crewe Guardian, Lichfield Mercury, East Anglian Daily Times, Leith Herald, Grimsby Telegraph, Evesham Standard, &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 13th, 1899.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
July 7	30·20	N.	...	120	85	62	64	66	Hazy
" 8	30·16	N.W.	...	120	82	64	64	66	Hazy
" 9	30·15	W.	...	120	81	61	64	70	Fine
" 10	30·03	S.W.	...	116	77	62	61	65	Overcast
" 11	29·92	S.W.	0·10	124	83	62	63	66	Hazy
" 12	29·73	S.	...	120	80	65	68	75	Fine
" 13	29·98	WNW	...	106	73	60	60	62	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College, (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (22nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (17th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: The Differential Diagnosis of Scrotal Swellings.

WEDNESDAY (19th).—MEDICAL GRADUATE COLLEGE (22, Chenies-street).—6 P.M. Dr. H. Tilley: Demonstration of Selected Cases (Throat and Nose Diseases).

THURSDAY (20th).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Gunn: Demonstration of Selected Cases.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

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THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1899, which was completed with the issue of June 24th, and the Title-page to the Volume, were given in THE LANCET of July 1st.

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